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IV. Appendix: History of Surface TensionV. Appendix: Biography of Marquis de Laplace; Chapter 7. Water Movement in Saturated Soil; I. Darcy's Law; II. Hydraulic Conductivity; III. Laplace's Equation; IV. Ellipse Equation; V. Linear Flow Laws; VI. Appendix: Biography of Apollonius of Perga; VII. Appendix: Biography of Henry Darcy; Chapter 8. Field Capacity, Wilting Point, Available Water, and the Non-Limiting Water Range; I. Field Capacity; II. Wilting Point; III. Available Water; IV. Non-Limiting Water Range; V. Biographies of Briggs and Shantz; Chapter 9. Penetrometer Measurements
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VI. Minidisk InfiltrometerVII. Measurement of Unsaturated Hydraulic Conductivity and Sorptivity with the Tension Infiltrometer; VIII. Measurement of Repellency with the Tension Infiltrometer; IX. Measurement of Mobility with the Tension Infiltrometer; X. Ellipsoidal Description of Water Flow into Soil from a Surface Disc; XI. Appendix: Biography of John Philip; Chapter 12. Pore Volume; I. Definitions; II. Illustration of Breakthrough Curves and Pore Volumes; III. Mathematical Analysis of Pore Volume; IV. Calculation of a Pore Volume; V. Pore Volumes Based on Length Units
VI. Miscible Displacement

Sommario/riassunto

Principles of Soil and Plant Water Relations combines biology and physics to show how water moves through the soil-plant-atmosphere continuum. This text explores the instrumentation and the methods used to measure the status of water in soil and plants. Principles are clearly presented with the aid of diagrams, anatomical figures, and images of instrumentation. The methods on instrumentation can be used by researchers, consultants, and the military to monitor soil degradation, including measurements of soil compaction, repellency, oxygen diffusion rate, and unsaturated hydraulic conduc