

## **About the Book**

*The book entitles “Theory And Principle Of Simulation Modeling In Soil-Plant System” emphasizes mainly on the fundamental theory principles and techniques of simulation model starting form very basic principles, the author has described how a model can be constructed step-by step describing typical models in various aspects of soil plant system. Broadly the book has discussed modeling under two headings- Dynamic model and static or equilibrium model dynamic models include spatially homogeneous models like transformations of potassium, phosphorus and carbon in soil crop growth model and potential evapotran aspiration. Spatially heterogeneous models include models of simulation of heat flow through soil, simulation of water flow through soils, simulating of actual evaporation and actual transpiration by plants from soil, simulation of salute movement through soil and simulation of nutrient uptake. Static or equilibrium models include chemical model like speciation in aqueous system and surface complexation models.*

### **Contents:**

- 1. Introduction to simulation modeling*
- 2. Modeling nitrogen and phosphorus transformation in soil*
- 3. Modeling crop growth and development*
- 4. Spatially heterogeneous models*
- 5. Modeling water flow through soil*
- 6. Modeling evapotranspiration*
- 7. Modeling solute movement and uptake by plant*
- 8. Static models*