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Nota di contenuto	Intro -- Half Title -- Title -- Copyright -- Contents -- Preface -- Acknowledgements -- 1 Introduction -- Crop Management - The Foundation of Production Agriculture -- Seeds Feed the World -- A Brief History of Crop Productivity -- Crop Management and Yield -- Purpose -- 2 Basic Plant Growth Processes -- Introduction -- Photosynthesis -- C3 and C4 photosynthesis -- Photosynthesis and the environment -- Solar radiation -- Carbon dioxide -- Temperature -- Respiration -- Leaf Senescence -- Seed Growth -- Growth of individual seeds -- Seed growth in crop communities -- Rate and duration of seed growth -- Physiological maturity -- Soybean -- Maize -- Other crops -- Water -- Evapotranspiration (ET) -- Reference or potential evapotranspiration (ET0) -- Measurement of evapotranspiration -- Water availability -- Precipitation -- Infiltration -- Soil water storage -- Summary -- 3 Growth of Crop Communities and the Production of Yield -- Introduction -- Growth Staging Schemes -- Growth of Crop Communities -- Murata's Stage I - vegetative growth -- Reproductive

growth -- Yield components -- Murata's Stage II - seeds per unit area (sink size) -- Murata's Stage III - seed filling and seed size -- Radiation-Use Efficiency (RUE) -- Harvest Index (HI) -- Time and Crop Productivity -- Summary -- 4 Crop Management: Principles and Practices -- Introduction -- Planting-Seed Quality -- Variety Selection -- Plant Population -- Planting Date -- Row Spacing -- Summary -- 5 Crop Production in the Future - Challenges and Opportunities -- Introduction -- Climate Change -- Molecular Biology, GMOs and Variety Improvement -- Precision Agriculture/Big Data -- New Crops -- New Approaches to Agriculture -- The Search for the Silver Bullet - A Futile Quest? -- Summary -- General Summary -- Appendix -- Table A1. Conversion table.
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Sommario/riassunto

This book describes the fundamental processes involved in the accumulation of biomass and the production of grain yield by agronomic crops and discusses how these processes underlie and influence management decisions.
