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Nota di contenuto	<p>""Foreword""; ""Preface""; ""About the Cover Illusmtration""; ""Contents""; ""Contributors""; ""Introduction""; ""1. History and Basic Biology""; ""1 .1 Brief History of Sugar and Sugar-producing Plants (E. Biancardi)""; ""1.2 Brief History of Sugar Beet Cultivation (E. Biancardi)""; ""1.3 Anatomy and Physiology (K. Klotz)""; ""1.3.1 Vegetative Growth""; ""1.3.1.1 Seed germination and early plant development""; ""1.3.1.2 Shoot morphology and development""; ""1.3.1.3 Root morphology and development""; ""1.3.2 Reproductive Growth""; ""1.3.2.1 Transition to reproductive growth""</p> <p>""1.3.2.2 Reproductive growth and floral anatomy""""1.3.2.3 Fertilization""; ""1.3.2.4 Seed morphology and development""; ""1.4 Cytology and Cytogenetics (G.N. Skaracis)""; ""1.4.1 Chromosome Morphology and Structure""; ""1.4.2 Meiotic Course""; ""1.4.2.1 Haploids""; ""1.4.2.2 Diploids""; ""1.4.2.3 Triploids""; ""1.4.2.4 Tetraploids""; ""1.4.2.5 Meiosis in related Beta species""; ""1.4.3 Primary Trisomics""; ""1.4.4 Identification of Alien Chromosomal Additions""; ""1.5 Sources of Genetic Variation, Genus Beta (B. Ford-Lloyd)""; ""1.5.1 Early Descriptions of Beet""</p> <p>""1.5.2 Classification History""""1.5.3 New Classification for Section Beta""; ""1.5.4 The Future of Beta Classification using DNA""; ""1.6 Plant Introduction and Genetic Diversity (L. Panella and R.T. Lewellen)""; ""1.7</p>

History of Sugar Beet Breeding (E. Biancardi)"; "References"; "2. Objectives of Sugar Beet Breeding"; "2.1 Introduction (E. Biancardi)"; "2.2 Polyploidy (G.N. Skaracis and E. Biancardi)"; "2.3 Monogerm Seed (E. Biancardi and G.N. Skaracis)"; "2.4 Male Sterility (G.N. Skaracis and E. Biancardi)"; "2.5 Annual and Biennial Growth Habit, Bolting Resistance (G. Steinrucken)"; "2.5.1 Annual Growth Habit"; "2.5.2 Biennial Growth Habit"; "2.5.3 Bolting and Flowering Regulation"; "2.5.4 Major Flowering Pathways"; "2.5.5 Flowering Traits in Breeding"; "2.5.6 Breeding for Bolting Resistance"; "2.6 Self-fertility and Self-incompatibility (M. De Biaggi)"; "2.6.1 Self-incompatibility"; "2.6.2 Self-fertility"; "2.7 Seed Quality (E. Biancardi and M. De Biaggi)"; "2.8 Root, Hypocotyl, and Leaf Color (E. Biancardi)"; "2.9 Morphological and Physiological Traits (E. Biancardi)"; "2.10 Resistance to Parasites"; "2.10.1 Introduction (E. Biancardi)"; "2.10.2 Viruses"; "2.10.2.1 Curly Top (L. Panella)"; "2.10.2.2 Beet Yellow (M. De Biaggi)"; "2.10.2.3 Beet mosaic (R.T. Lewellen and E. Biancardi)"; "2.10.2.4 Rhizomania (M. De Biaggi)"; "2.10.2.5 Beet soilborne virus (M. De Biaggi)"; "2.10.3 Bacteria"; "2.10.3.1 Bacterial vascular necrosis and rot (L.G.C. Campbell)"; "2.10.3.2 Yellow wilt (R.T. Lewellen and E. Biancardi)"; "2.10.4 Fungi"; "2.10.4.1 Cercospora leaf spot (G.N. Skaracis and E. Biancardi)"; "2.10.4.2 Powdery mildew (L.G. Campbell)"; "2.10.4.3 Downy mildew (E. Biancardi and R.T. Lewellen)";

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## Sommario/riassunto

The book comes during a time of rapid expansion in molecular technology-based selection approaches that are destined to modify or supplement conventional breeding methodology. The new technologies will allow genetic and physiological factors influencing sugar yield and quality to be assessed in great detail and manipulated. These novel techniques will also reduce the dependence of the sugar beet crop on chemical pesticides and fertilizers by using unique and improved resistance mechanisms against the various abiotic stresses and diseases and by producing varieties that use soil resources more efficiently. A whole chapter deals with the current information on the development of these new techniques and their integration into sugar beet breeding.

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