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Nota di contenuto	Front Cover; Contents; Foreword; Preface; Editor; Contributors; Chapter 1: Fructan Biosynthesis Regulation and the Production of Tailor-Made Fructan in Plants; Chapter 2: Dietary Fiber and Its Polyphenol Cotravelers in Healthy Eating : Seeking the Key Component in Apple Fruit; Chapter 3: Agave Fiber Structure Complexity and Its Impact on Health; Chapter 4: Fructooligosaccharides in Allium Species : Chemistry and Nutrition; Chapter 5: Potato Starches : Properties, Modifications, and Nutrition Chapter 6: Potential of the Filamentous Fungi from the Brazilian Cerrado as Producers of Soluble FibersChapter 7: Polysaccharides from Mushrooms : A Natural Source of Bioactive Carbohydrates; Chapter 8: Polysaccharides from Medicinal Mushrooms for Potential Use as Nutraceuticals; Chapter 9: Nonstarch Polysaccharides from Food Grains : Their Structure and Health Implications; Chapter 10: Barley -Glucan : Natural Polysaccharide for Managing Diabetes and Cardiovascular Diseases; Chapter 11: Chicory Fructans in Nutrition and the Formulation of Foods Dedicated to Blood Glucose Disorder Management Chapter 12: Dietary Fibers in Gastroenterology : From Prevention to

Recommendations to PatientsChapter 13: Soluble Dietary Plant Nonstarch Polysaccharides May Improve Health by Inhibiting Adhesion, Invasion, and Translocation of Enteric Gut Pathogens; Chapter 14: Polysaccharide-Based Structures in Food Plants : Gut and Health Effects; Chapter 15: Dietary Polysaccharides for the Modulation of Obesity via Beneficial Gut Microbial Manipulation; Chapter 16: Fructooligosaccharides, Diet, and Cancer Prevention : Myths or Realities?
Chapter 17: Polymers of the Plant Cell Wall or "Fiber" : Their Analysis in Animal Feeding and Their Role in Rabbit Nutrition and HealthChapter 18: Role of Dietary Polysaccharides in Monogastric Farm Animal Nutrition; Back Cover

Sommario/riassunto

This book reviews the evidence supporting the influence of plant fibers on our daily life by either having impacts on our nutrition or improving processed foods for human and animal feeding. By bringing new information and updating existing scientific data, this book will also be a consistent source of information for both professional and non-professionals that are involved in food science and technology, nutrition, and even medical sciences related to human health and well-being--
In a web search for 'sugar factory,' the site that most closely resembled a factory that makes sugar was a large sugar refinery and its expansion plans in New York City. It is noteworthy that despite our remarkable technological advances, we still cannot duplicate one of the most common activities of the plant kingdom--manufacturing sugar. I do not mean extracting it from plants and purifying it (making it white); that's easy. I mean building sugar molecules with carbon atoms like plants do in photosynthesis. One could argue that there are no man-made sugar factories because it is simply not cost-effective; it would be a losing proposition to compete with plants at this business. The first time I read about photosynthesis, I thought it seemed impossible that plants could take carbon dioxide and water and, using energy from the sun, produce sugar. These little sugar factories absorb carbon dioxide from the air at a concentration of about 0.04%, amid overwhelming concentrations of nitrogen and oxygen. And, when they are finished, they discard oxygen as a waste product! But they don't stop there, which is what this book is all about. If they don't use the monosaccharide products of photosynthesis directly, they hook them together to form disaccharides, oligosaccharides, and polysaccharides. The types of linkages between monosaccharides make for an incredible diversity of structure and function. Cellulose, starch, fructan, and B-glucan, are some of the products of the plant and fungal species described in this book--