

1. Record Nr.	UNINA9911019434003321
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Titolo	Barley for food and health : science, technology, and products / / Rosemary K. Newman, C. Walter Newman
Pubbl/distr/stampa	Hoboken, N.J., : John Wiley & Sons, c2008
ISBN	9786611814519 9781281814517 1281814512 9780470369333 0470369337 9780470371220 0470371226
Descrizione fisica	1 online resource (261 p.)
Altri autori (Persone)	NewmanC. Walter
Disciplina	641.3/316
Soggetti	Barley Cooking (Barley)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	BARLEY FOR FOOD AND HEALTH; CONTENTS; Preface; ACKNOWLEDGMENTS; 1 Barley History: Relationship of Humans and Barley Through the Ages; Introduction; Domestication and Use of Barley for Food; The Origin of Cultivated Barley; The Fertile Crescent; North Africa; Southern Europe; Southwestern, Central, and Northern Europe; East Asia; North and South America; Summary; 2 Barley: Taxonomy, Morphology, and Anatomy; Introduction; Taxonomy; Morphology and Anatomy; Roots; Tillers; Leaves; Spike; Kernels; Summary; 3 Barley Biotechnology: Breeding and Transgenics; Introduction; Improving the Barley Crop Traditional Barley Breeding Conventional Barley Breeding; Mutations; Haploids; Interspecific and Intergeneric Crosses; Molecular Markers; Barley Transgenics; Why Transgenics?; Delivery Systems; Target Tissues; In Vitro Culture; Altered Traits; Transgenic Barley Risk: True or Imagined?; Summary; 4 Barley: Genetics and Nutrient Composition; Introduction; Genetics and Nutrient Composition; Carbohydrates;

Starch; Sugars; Nonstarch Polysaccharides; Proteins; Lipids; Vitamins; Minerals; Phytochemicals; Genetics and Physical Characteristics; Row Type; Kernel Size, Kernel Weight, and Volume Weight

Kernel UniformitySummary; 5 Barley Processing: Methods and Product Composition; Introduction; Whole-Grain Processing; Cleaning, Sizing, and Conditioning; Blocking and Pearling; Grinding; Roller Milling; Malting; Secondary Processing; Extrusion; Steel Cutting; Flaking; Infrared Processing; Separation Techniques; Air Classification; Sieving; Special and Miscellaneous Processes; Summary; 6 Evaluation of Food Product Quality; Introduction; Objective Evaluation; Evaluation of Yeast Bread; Evaluation of Flatbreads; Evaluation of Quick Breads, Cakes, and Cookies; Evaluation of Pasta

Sensory EvaluationSummary; 7 Barley Food Product Research and Development; Introduction; Health Claims for Barley; Barley as a Functional Food; -Glucan: The Challenge of Barley as Food; Yeast Breads Made with Barley Flour; Flatbreads Made with Barley Flour; Chemically Leavened Baked Products Made with Barley Flour; Pasta Made with Barley Flour; Barley Brewers' and Distillers' Grains Used in Foods; Pearled and Other Forms of Barley; Malted Barley Products in Foods; Miscellaneous Barley Products; Summary; 8 Health Benefits of Barley Foods; Introduction; Barley and Heart Disease

Mechanisms Responsible for Cholesterol EffectsHuman Clinical Studies; Extracted -Glucan as a Food Additive; Glycemic Response to Carbohydrate Consumption; Effect of Barley on Carbohydrate Metabolism; Studies Using Subjects with Diabetes; Starch Amylose/Amylopectin Ratio and Resistant Starch; Effects of Food Form and Processing on the Glycemic Index; Second-Meal Effect; Beneficial Effects of Resistant Starch in Barley on the Intestinal Tract; Summary; 9 Current Status of Global Barley Production and Utilization; Barley Production; Barley Utilization; Outlook for Barley Food

10 Barley Foods: Selected Traditional Barley Recipes

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#### Sommario/riassunto

With coverage of chemistry, genetics, and molecular breeding, this book provides comprehensive and current information on barley types, composition, characteristics, processing techniques, and products. Its emphasis on the nutritional and health benefits of barley is especially timely with the FDA's 2005 confirmation of barley's cholesterol-lowering properties. This resource discusses barley's role in breads and related products, and reviews its health benefits, biotechnology, and breeding applications. This is the definitive resource for cereal chemists, food scientists, nutritionists, grain

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