

1. Record Nr.	UNINA9910812573203321
Titolo	Dry beans and pulses production, processing, and nutrition // editors, Muhammad Siddiq, Mark A. Uebersax
Pubbl/distr/stampa	Ames, Iowa, : Wiley-Blackwell, 2012
ISBN	1-118-44828-6 1-118-44829-4 1-283-59221-5 9786613904669 1-118-44787-5
Edizione	[1st ed.]
Descrizione fisica	1 online resource (410 p.)
Classificazione	TEC012000
Altri autori (Persone)	SiddiqMuhammad <1957-> UebersaxMark A
Disciplina	664/.0284
Soggetti	Dried beans Dried food industry
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	Title page; Copyright page; Contents; Contributors; Preface; Part I: Overview, Production and Postharvest Technologies; 1: Dry Beans and Pulses Production and Consumption-An Overview; Introduction; History and origin; Production and Trade; Global production and trade; US production and trade; Consumption Trends of Dry Beans; Dry Beans and Pulses As A Diverse Food Resource; Traditional utilization; Value-added processing and products; Nutritional and Health Considerations; Nutritional profile; Health significance; Beans and pulses use in weaning foods Constraints to beans and pulses utilizationBeans and Pulses in World Food Security; Summary; References; 2: Dry Bean Breeding and Production Technologies; Introduction; Production Practices and Trends; Production practices; Production trends; Bean Genetics; Bean species; Gene pools; Wild bean germplasm; Breeding Procedures and Practices; Breeding procedures; Breeding methods; Seed multiplication; Backcross breeding method; Single seed descent; Recurrent selection; Breeding for Specific Traits; Breeding for yield; Disease resistance;

Breeding for direct harvest systems; Processing quality
Micronutrient content Niche markets-organic beans; Genomic Research;
Comparative mapping with soybean; Genetically modified beans;
Summary and Future Directions; Acknowledgments; References; 3:
Market Classes and Physical and Physiological Characteristics of Dry
Beans; Introduction; Commercial Market Classes of Dry Beans;
Physiology of Dry Bean Seed; Structural and anatomical features of bean
seed; Characteristics of Seed Size and Shape; Seed Coat Pigmentation
and Color; USDA Standards for Dry Beans and Selected Pulses;
Summary; References
4: Postharvest Storage Quality, Packaging and Distribution of Dry
Beans Introduction; Dry Bean Storage and Handling; Conveying and
transfers; Receiving, cleaning and separation; Bean storage facilities;
Packaging and Market Distribution; Packaging systems for domestic
shipments; Domestic rail and truck transit; Packaging for overseas
shipments; Postharvest Storage Quality; Moisture content; Storage
temperature and time; Postharvest losses; Storage-Induced Defects;
Hard shell and hard-to-cook phenomena; Seed discoloration; Mold
development; Insect infestation; Bean Handling and Food Safety
Summary References; Part II: Composition, Value-Added Processing and
Quality; 5: Composition of Processed Dry Beans and Pulses;
Introduction; Processing and the Composition of Dry Beans; Protein;
Carbohydrate; Minor constituents; Processing and the Nutritional
Quality of Beans; Dehulling; Soaking; Germination; Fermentation;
Blanching and cooking; Extrusion cooking; Hard-to-Cook Phenomena
and Splitting of Processed Beans; Hard-to-cook (HTC) phenomena;
Splitting; Novel Processing Treatments and Impacts on Composition;
Conclusion; References
6: Hydration, Blanching and Thermal Processing of Dry Beans

Sommario/riassunto

The common beans and pulses are diverse food resources of high nutritional value (protein, energy, fiber and vitamins and minerals) with broad social acceptance. These legume crops demonstrate global adaptability, genotypic and phenotypic diversity, and multiple means of preparation and dietary use. Beans and pulses are produced in regions as diverse as Latin America, Africa, Asia, and North America, and on a scale similar to some other crops, such as wheat, corn, rice and soybeans. Numerous factors influence utilization, including bean type and cultivar selection, cropping environme
