

1. Record Nr.	UNISA996214624803316
Titolo	Sugar beet [[electronic resource] /] / edited by A. Philip Draycott
Pubbl/distr/stampa	Oxford ; ; Ames, Iowa, : Blackwell Pub., 2006
ISBN	1-280-74780-3 9786610747801 0-470-79969-2 0-470-75111-8 1-4051-7336-X
Descrizione fisica	1 online resource (514 p.)
Collana	World agriculture series
Altri autori (Persone)	DraycottA. Philip (Arthur Philip)
Disciplina	633.63
Soggetti	Sugar beet
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	Sugar Beet; Contents; Contributors; Foreword; Preface; Acknowledgements; 1 Introduction; Origins of crop; Production; Crop improvement; Where grown; Sugar consumption; Economics and politics; World production of sugar from beet and cane; Sugar beet performance; Future; Summary; References; 2 Development of Sugar beet; Introduction; Early domestication of beet crops; Development of sugar beet from fodder beet; Discovery of sugar in roots of beet; Re-examination of beets for sugar production; First beet sugar factory; Achard's legacy; Establishment of a global beet sugar industry; Europe North and South AmericaAsia and africa; Technical development of sugar beet; Plant breeding and genetics; Agronomy and plant protection; Crop mechanization; Future developments; References; 3 Plant Structure and Crop Physiology; Introduction; Canopy development and dry matter production; Leaf canopies and radiation interception; Factors affecting expansion of leaf area; Storage root development and sugar accumulation; Storage root development; Sugar accumulation; Nutritional physiology and beet quality; Nitrogen relations; Potassium and sodium; Reproductive development Physiological and agronomic aspects of boltingGenetic and molecular control of flowering; Summary; References; 4 Genetics and Breeding;

Introduction; Objectives of sugar beet breeding; Characters subjected to selection; Morphological and anatomical characters; Physiological characters; Chemical characters; The inheritance of specific characters; Growth habit; Biennial growth habit; Annual growth habit; Self-incompatibility and self-fertility; Male sterility; Cytoplasmic male sterility; Nuclear or Mendelian male sterility; The monogerm seed character; The SLC 101 source

Other sources of monogermityHypocotyl and root colour;

Autotetraploidy in sugar beet; General features of polyploid sugar beet;

Cytogenetic properties of autotetraploid sugar beet; Inheritance in autotetraploids; Genetic background to inbreeding depression and

heterosis in autotetraploids; Response to selection in autotetraploids;

Selection methods; Mass selection; Progeny selection and line breeding;

Half-sib progeny selection; Full-sib progeny selection; Inbreeding;

Recurrent selection; Traditional methods of variety development in

sugar beet; Diploid synthetic varieties

Anisoploid synthetic varietiesBackground to hybrid breeding in sugar

beet; Hybrid breeding methods and development of hybrid varieties;

Development of maintainer lines (o-types) and their male sterile (ms)

equivalents; Testing for combining ability and incorporation of selected

materials into hybrid varieties; Kinds of hybrids possible; Diploid

hybrids; Triploid hybrids; Diploid versus triploid hybrids; Breeding for

specific characters; Bolting resistance; Varieties for spring sowing;

Varieties for autumn sowing; Technological quality; Resistance to

diseases; Seedling diseases caused by fungi

Foliar diseases caused by fungi

Sommario/riassunto

Sugar beet, alongside sugar cane, is the main source of sugar across the world. Grown widely in Europe, North and South America, Asia and parts of North Africa, the crop is at the core of a multi-billion dollar global industry. A. Philip Draycott has gathered 32 international experts to create this defining text, providing a comprehensive review of the latest research in a clear and accessible form, providing the reader with: Definitive account of this major world cropCoverage of all aspects of successful sugar beet growingOver 2,500 references from i
