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Nota di contenuto	<p>Handbook of Bioenergy Crops A Complete Reference to Species, Development and Applications; Copyright; Contents; List of figures and tables; List of acronyms and abbreviations; Foreword; PART I; 1 Global Energy Production, Consumption and Potentials of Biomass; Structure of energy production and supply; Global potential of biomass; Perspectives of bioenergy crops; 2 Bioenergy Crops versus Food Crops; Impact of bioenergy on food security and food sovereignty; Bioenergy and food prices; 3 Transportation Biofuels; Automotive biofuels; Aviation biofuels</p> <p>4 Primary Biomass Productivity, Current Yield Potentials, Water and Land AvailabilityBasic elements of biomass accumulation; Photosynthetic pathways; The potential biomass resource base; 5 Harvesting, Logistics and Delivery of Biomass; Harvesting systems and machinery; Multi-phase procedure; Single-phase Procedure; Upgrading and storage; Chopped material; Bales; Bundles; Pellets; Chips; 6 Technical Overview: Feedstocks, Types of Biofuels and Conversion Technologies; Ethanol; Oils; Solid biofuels; Wet biofuels; Biogas; Conversion of biofuels to heat, power and electricity; Heat; Electricity</p>

Fuel cellsThe Stirling engine; Biofuel properties; 7 Environmental Impacts; Energy plant species; Environment impact; Energy balances; Reductions in greenhouse gas emissions; 8 Economic and Social Dimensions; Energy and development; Jobs and employment; Biomass stoves; Investment in the energy supply sector; Economic and social impact of bioenergy in developing countries; Investments and market development; 9 Integrated Bioenergy Farms and Rural Settlements; Integrated energy farms (IEFs) - a concept of the FAO; Juhnde bioenergy village; PART II; 10 Energy Crops Guide; Scope and definition Bioenergy cropsAleman grass (carib grass); Alfalfa; Algae; Annual ryegrass; Argan tree (ironwood); Babassu palm (babacu); Bamboo; Banana; Black locust; Broom (genista); Buffalo gourd; Cardoon; Cassava; Castor oil plant; Coconut palm; Common reed; Cordgrass; Cotton; Cuphea; Date palm; Eucalyptus; Giant knotweed; Giant reed; Groundnut; Hemp; Jatropha (physic nut); Jojoba; Kallar grass; Kenaf; Kudzu; Leucaena (horse tamarind); Lupins; Meadow foxtail; Miscanthus; Neem tree; Oil palm; Olive tree; Perennial ryegrass; Pigeonpea; Poplar; Rape and canola; Reed canarygrass; Rocket; Root chicory Rosin weedSafflower; Safou; Salicornia; Shea tree; Sorghum; Sorrel; Soya bean; Sugar beet; Sugar cane; Sunflower; Sweet potato; Switchgrass; Tall fescue (reed fescue); Tall grasses; Timothy; Topinambur (Jerusalem artichoke); White Foam; Water Hyacinth; Willow; PART III; 11 Ethanol Crops; Barley; Maize; Potato; Rice; Wheat; Pseudocereals: Amaranthus, buckwheat, quinoa; 12 Oil Crops; Calendula officinalis; Camelina sativa; Carthamus tinctorius; Crambe abyssinica; Dimorphoteca pluvialis; Flax; Lesquerella grandiflora and L. gordonii; Limnanthes alba; Linseed; 13 Biogas from Crops Biogas in developing countries

Sommario/riassunto

Biomass currently accounts for about fifteen per cent of global primary energy consumption and is playing an increasingly important role in the face of climate change, energy and food security concerns. Handbook of Bioenergy Crops is a unique reference and guide, with extensive coverage of more than eighty of the main bioenergy crop species. For each it gives a brief description, outlines the ecological requirements, methods of propagation, crop management, rotation and production, harvesting, handling and storage, processing and utilization, then finishes with selected refe
