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| Nota di contenuto | Legume Nodulation A Global Perspective; Contents; Preface; 1 Nodulation in a Taxonomic Context; 1.1 Caesalpinioideae; 1.2 Mimosoideae; 1.2.1 Acacieae; 1.2.2 Ingeae; 1.2.3 Mimoseae; 1.3 Papilionoideae; 1.3.1 Non-nodulation in the Papilionoideae; 1.3.2 Nodulating papilionoids with primitive nodule structure; 1.3.3 Tribes with the 50kb inversion; 1.3.4 The Dalbergioid clade; 1.3.5 The Mirbelioid clade; 1.3.6 The Millettoid clade; 1.3.7 The Robinioid clade; 1.3.8 The inverted repeat lacking clade (IRLC); 2 Global Distribution of Legumes; 2.1 Deserts; 2.2 Savannas; 2.2.1 African savannas 2.2.2 Neotropical savannas 2.2.3 Australian savannas; 2.3 Seasonally dry tropical forests (succulent biome); 2.3.1 Caatinga; 2.3.2 Other areas; 2.4 Rain forests; 2.4.1 Atlantic forest; 2.4.2 Temperate rain forests; 2.4.3 Tropical rain forests; 2.5 Temperate regions; 2.5.1 Mediterranean ecosystems; 2.5.2 Temperate, boreal and high altitude legumes; 2.6 Invasive legumes; 3 Evolution of Nodulation; 3.1 When did nodulation first occur?; 3.2 Where did nodulation first occur, and where |

are nodulated legumes going?; 3.2.1 Madagascar as a special case; 3.2.2 Recent evolution 3.3 How was the information for nodulation acquired?3.3.1 Ancient genes that have been recruited for symbiotic purposes; 3.3.2 Gene duplication; 3.4 Why was nodulation necessary?; 3.5 Model legumes; 4 Bacteria Nodulating Legumes; 4.1 -Proteobacteria; 4.1.1 Rhizobium; 4.1.2 Sinorhizobium and Ensifer; 4.1.3 Other members of Rhizobiaceae; 4.1.4 Bradyrhizobium; 4.1.5 Azorhizobium and Devosia; 4.1.6 Methylobacterium; 4.1.7 Ochrobactrum; 4.1.8 Mesorhizobium; 4.1.9 Phyllobacterium; 4.2 -Proteobacteria; 4.3 Other bacterial nodule occupants; 4.4 Specificity; 4.5 Competition 4.6 Stability and genetic exchange5 Development and Functioning of Nodules; 5.1 Root hair infection; 5.2 The roles of hormones; 5.3 Autoregulation; 5.4 Formation of symbiosomes; 5.4.1 Bacteroid size and shape; 5.4.2 The role of poly- γ -hydroxybutyrate (PHB); 5.5 Nodules lacking root hair infection; 5.5.1 Dalbergioid legumes; 5.5.2 Genisteae and Crotonaceae; 5.5.3 The special case of Sesbania; 5.6 Other variations in nodule structure; 5.7 Functioning nodules: the critical role of oxygen; 5.8 Nitrogen fixation and export of products; 5.8.1 The hydrogen enigma; 5.9 Nodule effectiveness 5.10 The bacteria within the nodule - control by the bacteria, plant or both?5.11 Constraints on nitrogen fixation in agriculture and the environment; 5.11.1 Waterlogging, drought and salinity; 5.11.2 Temperature; 5.11.3 Edaphic factors; 5.12 Legumes, pests and pathogens; 6 Some Legumes for the Future?; 6.1 Human food; 6.1.1 Vigna spp.; 6.1.2 Other phaseoloid legumes; 6.2 Forage legumes; 6.3 Pharmaceutical uses; 6.4 Other uses; Appendices; I Caesalpinioideae; II Mimosoideae; III Papilionoideae; References; Taxonomic Index; General Index; Color plate section between pages 86 and 87; Rest

Sommario/riassunto

This important book provides a comprehensive review of our current knowledge of the world's leguminous plants and their symbiotic bacteria. Written by Professor Janet Sprent, a world authority in the area, Legume Nodulation contains comprehensive details of the following: An up to date review of legume taxonomy and a full list of the world's genera Details of how legumes are distributed throughout the world A review of the evolution of legume nodulation Comprehensive details of all microorganisms known to be symbiotic with legumes Ecological
