

Contents

Contributors	ix
Dedication: Theodore DeJong	xi
<i>Ian Warrington</i>	
1. Molecular Physiology of Fruit Growth in Apple	1
<i>Anish Malladi</i>	
I. Introduction	2
II. Morphology and Anatomy of the Apple Fruit	2
III. Flower Growth Before Bloom	5
IV. Fruit Set	7
V. Fruit Growth	9
VI. Conclusions	31
Literature Cited	33
2. Mechanosensing of Plants	43
<i>Marc-André Sparke and Jens-Norbert Wünsche</i>	
I. Introduction	44
II. Thigmomorphogenesis	47
III. Natural and Artificial Induction of Thigmo Responses	48
IV. Morphological Plant Responses	50
V. Physiological Plant Responses – Cellular Signaling	57
VI. Molecular Aspects	69
VII. Application Strategies in Horticulture	70
VIII. Conclusions	72
Literature Cited	73
3. Microgreens: Definitions, Product Types, and Production Practices	85
<i>Sven Verlinden</i>	
I. Introduction	86
II. History of Immature Leafy Vegetables	92

III.	Seedling Development in Other Crops – Growth and Development of Seedlings	94
IV.	Production Strategies	96
V.	Nutritional Value	104
VI.	Microbiological Safety and Postharvest Biology and Technology	114
VII.	Sensory Attributes and Qualities	117
VIII.	Health Effects	117
IX.	Future of Microgreens	118
	Literature Cited	119
4.	The Durian: Botany, Horticulture, and Utilization	125
	<i>Saichol Ketsa, Apinya Wisutiamonkul, Yossapol Palapol, and Robert E. Paull</i>	
I.	Introduction	127
II.	Botany	140
III.	Cultural Practices	149
IV.	Chemical Composition and Nutritional Value	173
V.	Postharvest Physiology	177
VI.	Harvesting and Postharvest Handling	184
VII.	Utilization	192
VIII.	Conclusions	195
	Literature Cited	195
5.	The genus <i>Cupressus</i> L.: Mythology to Biotechnology with Emphasis on Mediterranean Cypress (<i>Cupressus sempervirens</i> L.)	213
	<i>Homayoun Farahmand</i>	
I.	Introduction	215
II.	Cupressaceae (Geographical Distribution and Horticultural Importance)	215
III.	The Genus <i>Cupressus</i>	216
IV.	The Role of Mediterranean Cypress in Persian Gardens	249
V.	Medicinal Values	252
VI.	Breeding and Genetic Improvement	254
VII.	Abiotic and Biotic Challenges	256
VIII.	Conservation of Genetic Resources	261
IX.	Conventional Propagation and Micropropagation	263
X.	Biotechnology	265
XI.	Conclusions	267
	Literature Cited	268

CONTENTS

6. Taxonomy and Botany of the Caricaceae	289
<i>V.M. Badillo and Freddy Leal</i>	
I. Introduction	290
II. History of the Papaya and Other Caricaceae	291
III. Taxonomic History	291
IV. New Proposals for the Taxonomy of Caricaceae	295
V. Botany of the Family and the Genera	297
VI. Concluding Comments	319
Literature Cited	320
7. Entomopathogens: Potential to Control Thrips in Avocado, with Special Reference to <i>Beauveria bassiana</i>	325
<i>Gracian T. Bara and Mark D. Laing</i>	
I. Introduction	326
II. Commercial Production in South Africa	328
III. Requirements for Export and Local Quality	329
IV. Economics of Avocado Production	329
V. Pests and Diseases of Avocado	330
VI. Thrips of Avocado	330
VII. Management of Thrips	333
VIII. Entomopathogens	336
IX. Conclusions	356
Literature Cited	357
Subject Index	369
Cumulative Subject Index	372
Cumulative Contributor Index	406