

# Book Vegetable grafting



COST action 1204  
Status  
15 September 201

# Status quo of the book: Vegetable Grafting

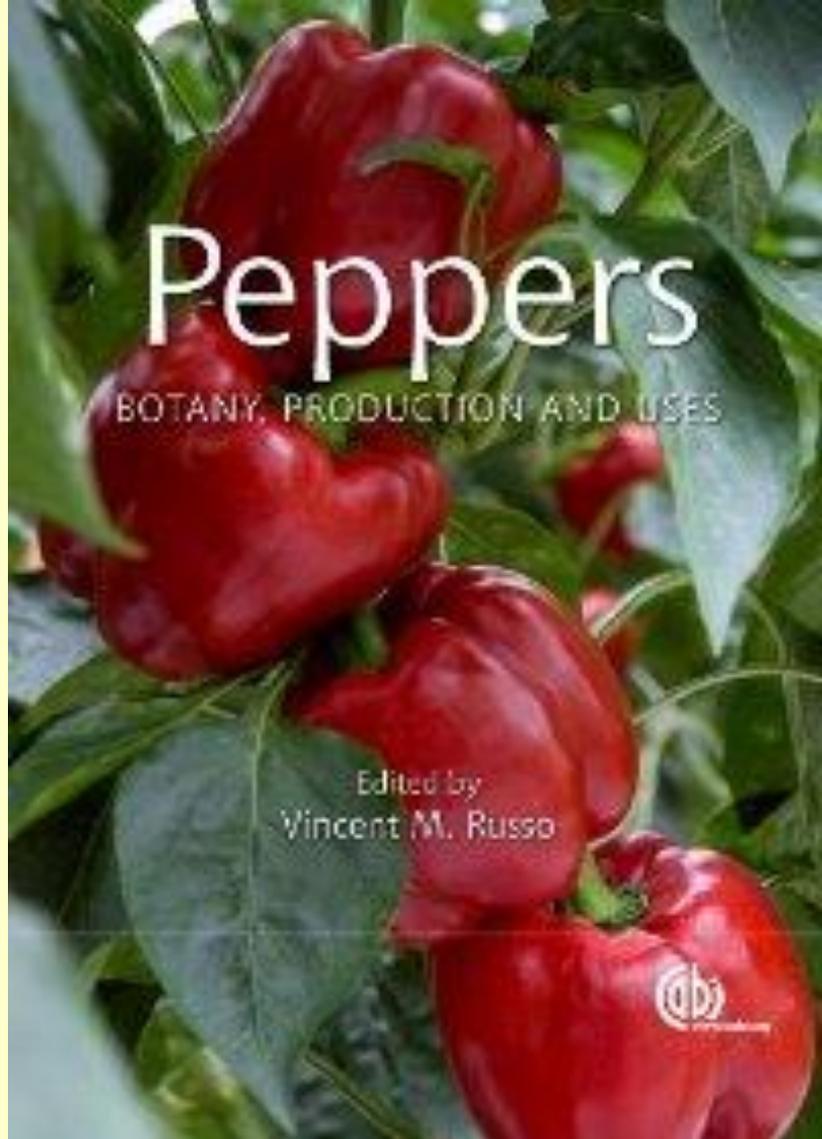
1. Background and goal: Book available: 31.12.2016
2. Editorial team:  
Giuseppe Colla, Francisco Perez Alfocea, Dietmar Schwarz
3. Publisher CABI
4. Chapters and sections available.
5. Next steps.

## 3. Publisher



### CABI

- less commercial
- hard copy (425 x)
- price of 85 £ (= 110 €) per book
- 100 books for dissemination paid by the EU COST
- Open Access after 2 years paid by the EU COST
- 125,000 words, i.e. 300 pages
- 40 illustrations (final artwork)
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# Application

- **Content.** The book will contain a summary of the work on the science and practice of grafting vegetable plants. Starting from the adaptation of the grafting practice from fruit trees to fruit vegetables in the beginning of the last century, we will inform about the reasons, methods, and applications of grafting. The chapters present the current scientific knowledge on the different areas of grafting, breeding, signalling, and physiological including molecular mechanisms of the grafting itself as well as of the beneficial effects caused by grafting. One chapter will cover the side effects related with the grafting on fruit quality.
- **Academic level.** The book will be both: a practical guide for the use and application of grafting methods and a scientific textbook on the mode of action involved in the grafting process. The emphasis will be on the scientific part and most of the contributors are doing research and working in grafting projects for research institutes or universities.
- **Approach:** The editorial team is collaborating with the authors and contributors within a EU COST action 1204 “vegetable grafting” ([www.cost.eu/domains\\_actions/fa/Actions/FA1204](http://www.cost.eu/domains_actions/fa/Actions/FA1204)). More than 20 EU and neighbourhood countries as well as other specialist from further countries are involved in the action. One of the outcomes of the action we promised is this book ([www.vegetablegrafting.unitus.it](http://www.vegetablegrafting.unitus.it)).

## 4. Chapters and sections available.

2.1. Genetic resources for cucurbitaceae (Belen Pico and Halit Yetisir)	30
4. Rootstock-scion signalling: rootstock-mediated key factors for scion performance (Jan-Henk Venema, Ian Dodd).	30
5. Physiological and molecular mechanisms underlying graft compatibility (Ana Pina)	30
6. Rootstock-mediated resistance to environmental stresses (Roni Cohen, Dietmar Schwarz)	40
Grafting as agro-technology for reducing disease damage (Roni Cohen)	20
Abiotic stresses (Dietmar Schwarz)	20
Temperature (D. Schwarz, J.-H. Venema, D. Savvas, G. Ntatsi)	5
Nutrient efficiency. (D. Savvas, G. Ntatsi, Y. Rouphael)	3
Heavy metals and metalloids (M. Edelstein, G. Colla, Ben Hur)	3
Adverse soil pH (Aluminium) (Y. Rouphael, G. Colla, D. Schwarz)	2
Drought and flooding etc. (Y. Rouphael, D. Savvas, G. Ntatsi)	2
8. Practical applications (responsible?)	30
Recommendations for the handling of grafted plants (A. Koren)	

## 5. Next steps. Timetable:

1. Submission of the missing chapters until 15 October 2015
  - a) Introduction
  - b) Rootstock breeding: current practices and future technologies
  - b) Salinity
  - c) Fruit quality
  - d) Practical applications
2. Review process until 1 December 2015
3. Revisions until 1 February 2016
4. Second review process 1 May 2016
5. Final submission to the publisher 1 June 2016

# Chapters, sections, authors

Preface (Editors)	2
Introduction (Zhilong Bie)	12
Rootstock breeding: current practices and future technologies and breeding goals (A. Thompson, P. Bebeli, G. Ntatsi) .	30
Current and future breeding technologies	
Priority breeding goals	
Breeding barriers and challenges	
Genetic resources for vegetable rootstock breeding (B. Pico, H. Yetisir)	30
Germplasm collections. Cucurbitaceae, Solanaceae, Others (cardoos, runner beans etc.)	
The sources of genetic material currently in use	
Potential for providing beneficial alleles based on ecological distribution and species barriers	
Rootstock-scion signalling: rootstock-mediated key factors for scion performance (J-H. Venema, I. Dodd).	30
Current knowledge of chemical, ionic and hydraulic signalling between	
The physical and chemical key regulators	
Physiological and molecular mechanisms underlying graft compatibility (Ana Pina)	30
Rootstock-mediated resistance to environmental stresses (Dietmar Schwarz, Roni Cohen)	
Biotic stresses	20
Abiotic stresses	20
Vegetable quality (L.Cherubino, C. Gisbert)	30
Definition of product quality	
Rootstock effects on fruit quality	
Mechanisms of fruit quality effects	
Control of quality by grafting, future perspectives	
Practical application	30
Recommendations for grafting combinations	
Recommendations for the handling of grafted plants (A. Koren)	
Recommendations for the use of grafted plants in the greenhouse (Anja Dieleman)	
Recommendations for the use of grafted plants in field (A. Koren)	
Future perspective of application (Editors)	
References (could also be summarized after each chapter)	20
Index	10
	Total ≈280

# Responsible contributors/authors

Giuseppe Colla:	Preface, introduction, salinity
Francisco Perez Alfocea:	Preface, ?
Andrew Thompson:	Genetics, Breeding
Halit Yetisir:	- “ -
Jan-Henk Venema:	Rootstock-scion signalling
Ian Dodd:	- “ -
Ana Pina:	Physiological and molecular mechanisms
Dietmar Schwarz	Preface, abiotic stresses, Temperature
Roni Cohen:	Biotic stresses
Leonardi Cherubino:	Fruit quality
Carmina Gisbert:	- “ -