



Universiteit
Leiden
The Netherlands

From the root of variation: A metabolomics perspective to plant soil-feedback

Huberty, M.D.

Citation

Huberty, M. D. (2020, November 24). *From the root of variation: A metabolomics perspective to plant soil-feedback*. NIOO-thesis. Retrieved from <https://hdl.handle.net/1887/138402>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/138402>

Note: To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/138402> holds various files of this Leiden University dissertation.

Author: Huberty, M.D.

Title: From the root of variation: A metabolomics perspective to plant soil-feedback

Issue date: 2020-11-24

From the root of variation –
A metabolomics perspective to
plant soil-feedback

Martine Deborah Huberty

Copyright © 2020, Martine Deborah Huberty

From the root of variation - A metabolomics perspective to plant soil-feedback

The research described in this thesis was carried out in the department of Terrestrial Ecology at the Netherlands Institute of Ecology (NIOO-KNAW) and the Institute of Biology of Leiden University, The Netherlands and funded by NWO VICI grant 865.14.006

Design of the cover: Julika Hother

Printed by Printsupport4u, Steenwijk

ISBN 978-94-92597-55-7

This dissertation, or parts of, may be reproduced freely for scientific and educational purposes as long as the source of the material is acknowledged

From the root of variation - A metabolomics perspective to plant soil-feedback

Proefschrift

ter verkrijging van

de graad van Doctor aan de Universiteit Leiden,

op gezag van Rector Magnificus prof.mr. C.J.J.M. Stolker,

volgens besluit van het College voor Promoties

te verdedigen op dinsdag 24 November 2020

klokke 15:00 uur

door

Martine Deborah Huberty

geboren te Ettelbrück, Luxembourg

in 1988

Promotiecommissie

Promotor: **Prof. Dr. ir. T. M. Bezemer**

Leiden University

Co-promotor: **Dr. Y.H. Choi**

Leiden University

Promotiecommissie: **Prof. Dr. G.P. van Wezel** (voorzitter)

Leiden University

Prof. Dr. R. Offringa (secretaris)

Leiden University

Prof. Dr. J. Memelink

Leiden University

Prof. Dr. J.M. Raaijmakers

Leiden University

Prof. Dr. P. Garbeva

University of Copenhagen

Netherlands Institute of Ecology (NIOO-KNAW)

Dr. S. Rudaz

University of Geneva

For my grandparents

Contents

Chapter 1: General introduction	11
Chapter 2: Aboveground plant metabolomic responses to plant-soil feedbacks and herbivory	27
Chapter 3: Soil inoculation alters leaf metabolic profiles in genetically identical plants.....	61
Chapter 4: Temporal dynamics of plant-soil feedbacks on soil microbiomes, leaf metabolomics and plant-insect interactions	91
Chapter 5: Herbivory effects on the metabolome of <i>Taraxacum officinale</i> monitored in multi analytical platforms and their quality comparison	139
Chapter 6: General discussion	169
References	185
Summary	199
Samenvatting	203
Zesummefaassung	207
Acknowledgments	211
Curriculum vitae.....	215
Publications	216
PE&RC Research and Training statement	217

