Table of contents

Αl	bbreviations	4
1	Introduction	5
2	Assimilate partitioning affects ¹³ C fractionation of recently assimilated carbon in maize	
	Plant and Soil (2006), 284: 319-333	17
3	Three-source partitioning of CO ₂ efflux from soil planted with maize by ¹³ C natural abundan	ce
	fails due to inactive microbial biomass	
	Soil Biology & Biochemistry (2006), 38: 2772-2781	39
4	Root-derived carbon in soil respiration and microbial biomass determined by ¹⁴ C and ¹³ C	
	Soil Biology & Biochemistry (2007), in press, doi:10.1016/j.soilbio.2007.09.022	59
5	Partitioning of CO ₂ efflux from soil planted with maize by ¹³ C natural abundance and ro	юt
	exclusion	
	Journal of Plant Nutrition and Soil Science (2007), under review	83
6	Final conclusions and perspectives10)7
7	Summary1	15
8	Zusammenfassung	18
Ac	knowledgements12	21
Cu	rriculum vitae	22

Note: Chapter 5 is written in American English; all remaining chapters are written in British English.