

Parameter description	Symbol	Default value ( $\times 0.001$ )	Calibrated value by SBO ( $\times 0.001$ )
Decomposition rate from slow pool.	$c(11,11)$	200	495.6
Decomposition rate from passive pool.	$c(12,12)$	4.5	1.01
Temperature sensitivity of C decomposition.	$Q_{10}$	2000	1737
Labile C fraction effect on C partitioning from leaves to surface metabolic litter.	$w_1$	1000	589.04
Labile C fraction effect on C partitioning from roots to soil metabolic litter.	$w_2$	200	4.52
Partitioning from surface structural to surface microbial pool if no lignin is present in surface structural litter.	$l_1$	400	384.5
Lignin effect of partitioning from surface structural litter to surface microbial litter.	$l_2$	400	689
Lignin effect on partitioning from surface structural litter to soil slow pool.	$l_3$	700	7.499
Partitioning from soil structural to soil microbial pool if no lignin is present in soil structural litter.	$l_4$	450	697.7
Lignin effect on partitioning from soil structural litter to soil microbial pool.	$l_5$	450	54.46
Lignin effect on partitioning from soil structural litter to soil slow pool.	$l_6$	700	871.5
C partitioning from soil microbial pool to slow pool if no sand or clay is present.	$t_1$	169	747.7
Clay effect on C partitioning from soil microbial pool.	$t_2$	5.44	29.6
Sand effect on C partitioning from soil microbial to slow pool.	$t_3$	678	636.8
Combined effect of sand and clay on C partitioning from soil microbial pool.	$t_4$	22	99.5
C partitioning from soil microbial to passive pool if no sand or clay is present.	$t_5$	0.51	0.152
Sand effect on C partitioning from soil microbial to passive pool.	$t_6$	2.04	12.99
Clay effect on C partitioning from slow pool to passive pool.	$t_7$	4.05	24.2
C partitioning from slow to passive pool if no clay is present.	$t_8$	14	0.012
C partitioning from slow to soil microbial pool if no clay is present.	$t_9$	449	368.8