

Parameters	Units	Prior values	C-MFT1	C-MFT2	C-MFT3
Cost			208	201	206
AdjSA	Unitless	37	36 ± 2	38 ± 2	39 ± 2
AdjSP	Unitless	29	29 ± 2	31 ± 2	31 ± 2
AvailCr	10 <sup>-3</sup>	4.1	5.3 ± 0.8	4.2 ± 0.8	4.2 ± 0.8
b	Unitless	0.01	0.14 ± 0.04	0.16 ± 0.04	0.12 ± 0.03
BAr	Unitless	0.3	0.26 ± 0.08	0.41 ± 0.09	0.36 ± 0.09
CAE	Unitless	0.6	0.81 ± 0.09	0.79 ± 0.08	0.85 ± 0.09
d <sub>ENZ</sub>	10 <sup>-3</sup> h <sup>-1</sup>	1	2.1 ± 0.7	2.7 ± 0.5	2.0 ± 0.5
d <sub>MFT</sub>	10 <sup>-3</sup> h <sup>-1</sup>	2	2.7 ± 1.5	1.9 ± 1.1	1.8 ± 1.4
FEr	Unitless	0.1	0.45 ± 0.19	0.50 ± 0.19	0.45 ± 0.18
K <sub>BA</sub>	Unitless	6	6.2 ± 1.9	8.1 ± 2.0	8.7 ± 2.0
K <sub>des</sub>	10 <sup>-4</sup> h <sup>-1</sup>	10	28 ± 10	6.7 ± 2.9	9.6 ± 3.5
Ke	10 <sup>-4</sup> h <sup>-1</sup>	0.1	1.3 ± 0.9	2.3 ± 1.2	0.93 ± 0.54
K <sub>rref</sub>	10 <sup>-3</sup> h <sup>-1</sup>	2	2.5 ± 1.0	2.0 ± 0.6	2.9 ± 0.8
KM <sub>F</sub>	gC (kg soil) <sup>-1</sup>	50	77 ± 20	50 ± 19	57 ± 19
KM <sub>S</sub>	gC (kg soil) <sup>-1</sup>	250	224 ± 92	471 ± 96	314 ± 92
KM <sub>uptake</sub>	gC (kg soil) <sup>-1</sup>	0.26	13 ± 4	13 ± 5	15 ± 5
LtoSS	Unitless	0.02	0.24 ± 0.07	0.29 ± 0.06	0.24 ± 0.07
SEr	Unitless	0.1	0.46 ± 0.17	0.70 ± 0.18	0.61 ± 0.17
Adsorb <sub>max</sub>	gC (kg soil) <sup>-1</sup>	1.35	3.1 ± 0.7	2.1 ± 0.7	3.2 ± 0.8
Vmax <sub>LM</sub>	g C (g ENZ C) <sup>-1</sup> h <sup>-1</sup>	56	177 ± 81	112 ± 68	157 ± 75
Vmax <sub>SS</sub>	g C (g ENZ C) <sup>-1</sup> h <sup>-1</sup>	1	7.5 ± 5.7	13 ± 7	18 ± 9
Vmax <sub>uptake,C</sub>	g C (g ENZ C) <sup>-1</sup> h <sup>-1</sup>	0.24	0.74 ± 0.27	0.29 ± 0.13	0.52 ± 0.20
Parameters	Units	Prior values	CN-MFT1	CN-MFT2	CN-MFT3
Cost			203	201	218
AdjSA	Unitless	37	37 ± 2	38 ± 2	37 ± 2
AdjSP	Unitless	29	32 ± 2	31 ± 2	29 ± 2
AvailCr	10 <sup>-3</sup>	4.1	4.7 ± 0.8	4.2 ± 0.8	6.1 ± 0.8
b	Unitless	0.01	0.18 ± 0.05	0.16 ± 0.04	0.24 ± 0.08
BAr	Unitless	0.3	0.48 ± 0.10	0.41 ± 0.09	0.48 ± 0.12
CAE	Unitless	0.6	0.85 ± 0.09	0.79 ± 0.08	0.85 ± 0.08
d <sub>ENZ</sub>	10 <sup>-3</sup> h <sup>-1</sup>	1	1.8 ± 0.5	2.7 ± 0.5	1.5 ± 0.8
d <sub>MFT</sub>	10 <sup>-3</sup> h <sup>-1</sup>	2	2.3 ± 1.2	1.9 ± 1.1	2.6 ± 1.2
FEr	Unitless	0.1	0.37 ± 0.19	0.50 ± 0.19	0.57 ± 0.20
K <sub>BA</sub>	Unitless	6	5.7 ± 1.9	8.1 ± 2.0	11 ± 2
K <sub>des</sub>	10 <sup>-4</sup> h <sup>-1</sup>	10	14 ± 6	6.7 ± 2.9	35 ± 11
Ke	10 <sup>-4</sup> h <sup>-1</sup>	0.1	1.7 ± 1.0	2.3 ± 1.2	0.69 ± 0.59
K <sub>rref</sub>	10 <sup>-3</sup> h <sup>-1</sup>	2	2.0 ± 0.6	2.0 ± 0.6	1.6 ± 0.6
KM <sub>F</sub>	gC (kg soil) <sup>-1</sup>	50	29 ± 18	50 ± 19	70 ± 20
KM <sub>S</sub>	gC (kg soil) <sup>-1</sup>	250	401 ± 96	471 ± 96	120 ± 93
KM <sub>uptake</sub>	gC (kg soil) <sup>-1</sup>	0.26	9.2 ± 4.8	13 ± 5	11 ± 5
LtoSS	Unitless	0.02	0.27 ± 0.07	0.29 ± 0.06	0.14 ± 0.08
SEr	Unitless	0.1	0.46 ± 0.15	0.70 ± 0.18	0.47 ± 0.19
Adsorb <sub>max</sub>	gC (kg soil) <sup>-1</sup>	1.35	3.8 ± 0.8	2.1 ± 0.7	2.9 ± 0.7
Vmax <sub>LM</sub>	g C (g ENZ C) <sup>-1</sup> h <sup>-1</sup>	56	83 ± 65	112 ± 68	190 ± 86
Vmax <sub>SS</sub>	g C (g ENZ C) <sup>-1</sup> h <sup>-1</sup>	1	13 ± 8	13 ± 7	2.7 ± 3.3
Vmax <sub>uptake,C</sub>	g C (g ENZ C) <sup>-1</sup> h <sup>-1</sup>	0.24	0.29 ± 0.17	0.29 ± 0.13	0.48 ± 0.22