Supplementary Materials

Table S1. Climate data from the Vellanikkara, Thrissur Station. Latitude: 10°31`; Longitude: 76°13`. Height is 40 m above MSL. Monthly data from Jan 1983 to Sep 2005.

Year	Month	Maximum Temperature	Minimum Temperature	Precipitation
		°C	°C	mm
1983	January	33.23	21.97	0
1983	February	34.48	22.68	0
1983	March	36.17	23.76	0
1983	April	36.16	27.76	0
1983	May	35.45	25.49	37.4
1983	June	31.51	24.41	387.2
1983	July	29.66	23.68	580.1
1983	August	28.96	23.79	684.5
1983	September	29.53	23.42	494.6
1983	October	31.18	23.11	149.8
1983	November	31.83	22.29	60.2
1983	December	31.35	23.88	24.4
1984	January	32.38	23.30	0
1984	February	34.28	24.24	27
1984	March	35.51	24.34	18.9
1984	April	34.46	24.83	89.2
1984	May	34.65	25.82	39.4
1984	June	29.08	22.75	923.1
1984	July	28.56	22.88	730.4
1984	August	31.30	22.97	260.2
1984	September	30.41	23.22	158.6
1984	October	29.87	22.12	323.7
1984	November	32.06	23.15	7.8
1984	December	31.83	20.80	16.4
1985	January	32.59	22.98	14.7
1985	February	34.74	22.81	0
1985	March	36.14	24.57	2
1985	April	35.54	25.15	20.3
1985	May	34.08	25.30	216.4
1985	June	28.27	22.76	947.1
1985	July	28.48	22.63	532.3
1985	August	28.84	22.73	374.6
1985	September	30.51	23.04	59.3
1985	October	31.12	22.51	377.1
1985	November	31.50	22.29	14.4
1985	December	32.20	22.85	58.8
1986	January	32.47	22.41	1.2

1986	February	34.38	22.17	1.9
1986	March	31.02	24.42	8.4
1986	April	34.31	25.20	23.2
1986	May	33.97	24.68	118.6
1986	June	29.92	23.02	670.4
1986	July	29.53	23.29	269
1986	August	29.42	22.75	358.7
1986	September	30.40	22.67	289.8
1986	October	31.81	22.95	421.3
1986	November	31.27	22.07	176.2
1986	December	32.43	23.40	10.8
1987	January	33.06	22.65	0
1987	February	35.03	22.37	0
1987	March	36.47	22.86	0
1987	April	36.25	25.14	13.3
1987	May	36.09	24.69	95
1987	June	30.89	23.83	786.3
1987	July	30.32	23.54	336.5
1987	August	29.71	23.53	488.4
1987	September	31.52	23.90	174
1987	October	31.93	23.85	280.4
1987	November	31.60	22.85	224.4
1987	December	31.65	23.28	64.6
1988	January	32.36	21.99	0
1988	February	35.77	23.11	7.8
1988	March	35.67	24.35	37.9
1988	April	35.07	24.28	145.4
1988	May	33.60	25.19	242.6
1988	June	29.98	23.65	582.1
1988	July	29.06	23.16	545
1988	August	29.21	24.45	507.8
1988	September	29.86	23.17	711.7
1988	October	31.67	23.32	116.6
1988	November	32.63	22.87	11
1988	December	32.57	22.29	15.8
1989	January	33.44	22.19	0
1989	February	36.35	21.19	0
1989	March	36.47	23.29	31.3
1989	April	35.34	25.13	52.6
1989	May	33.65	24.46	115.8
1989	June	29.44	22.71	784.6
1989	July	29.09	23.26	562
1989	August	29.46	23.10	319.9
1989	September	29.91	23.10	180.1
1989	October	31.05	23.00	351.3
1989	November	32.53	22.06	8.1

1989	December	32.72	23.26	0
1990	January	33.45	20.78	3.5
1990	February	34.87	21.93	0
1990	March	36.00	23.80	4.4
1990	April	35.78	25.37	38.8
1990	May	31.53	24.14	429.9
1990	June	29.68	23.34	471.3
1990	July	28.44	22.46	759.3
1990	August	28.85	23.05	356.4
1990	September	30.73	23.39	87.5
1990	October	31.87	23.17	309.7
1990	November	31.22	22.73	69.8
1990	December	32.28	23.15	1.8
1991	January	33.59	22.21	3.9
1991	February	35.93	21.76	0
1991	March	36.44	24.89	1.8
1991	April	35.61	24.53	83.8
1991	May	35.14	25.51	56.1
1991	June	29.74	23.77	993.1
1991	July	29.15	22.84	975.6
1991	August	29.05	22.75	533.3
1991	September	31.53	23.55	61.5
1991	October	30.92	23.18	281.7
1991	November	31.46	22.96	191.3
1991	December	31.87	21.72	0.2
1992	January	32.57	20.95	0
1992	February	34.43	21.78	0
1992	March	36.88	22.81	0
1992	April	36.27	24.45	48.6
1992	May	33.84	24.76	90.6
1992	June	30.09	23.73	979.8
1992	July	28.85	22.71	874.5
1992	August	28.85	23.28	564.1
1992	September	30.14	23.07	302.9
1992	October	30.53	22.89	386.7
1992	November	31.02	23.11	377.5
1992	December	31.06	22.35	2
1993	January	32.65	20.73	0
1993	February	34.11	21.98	6.6
1993	March	35.39	23.65	0
1993	April	35.62	24.95	32.1
1993	May	34.44	24.76	131.1
1993	June	30.15	23.90	700.3
1993	July	28.54	22.91	661.6
1993	August	29.64	23.39	287.3
1993	September	30.59	23.09	85.3

1993	October	30.75	23.35	442.4
1993	November	31.44	23.63	74.6
1993	December	31.56	23.05	18
1994	January	32.91	22.72	19.4
1994	February	34.83	23.06	1.7
1994	March	36.24	23.66	21
1994	April	34.91	24.30	165.2
1994	May	33.61	24.69	123.9
1994	June	28.90	22.96	1015.1
1994	July	28.66	22.37	1002.1
1994	August	30.02	22.82	479.2
1994	September	31.77	23.18	240.5
1994	October	32.28	22.74	386.2
1994	November	31.78	23.35	125.3
1994	December	32.15	22.20	0
1995	January	32.95	22.37	0
1995	February	35.41	23.40	0.5
1995	March	37.59	23.77	2.8
1995	April	36.61	24.90	118.7
1995	May	33.48	23.93	370.5
1995	June	31.64	23.14	502.5
1995	July	29.87	23.15	884.7
1995	August	30.58	23.74	448.7
1995	September	31.15	23.47	282.5
1995	October	33.17	23.17	110.4
1995	November	31.38	22.57	88.4
1995	December	32.46	21.44	0
1996	January	33.09	22.36	0
1996	February	34.69	23.39	0
1996	March	36.44	24.34	0
1996	April	34.60	25.03	152
1996	May	32.82	25.25	95.6
1996	June	30.46	23.77	400.3
1996	July	28.78	23.06	588.7
1996	August	29.07	23.61	310
1996	September	29.20	23.74	391.6
1996	October	30.07	22.93	219.3
1996	November	31.47	23.57	23.1
1996	December	30.49	21.84	60.8
1997	January	32.05	22.08	0
1997	February	33.94	21.83	0
1997	March	35.70	23.99	0
1997	April	35.18	24.51	8.2
1997	May	34.42	24.49	63
1997	June	31.18	23.01	720.5
1997	July	28.53	22.53	1339.2

1997	August	28.95	22.79	636.8
1997	September	30.54	23.35	164
1997	October	32.20	23.63	194.7
1997	November	31.61	23.24	211.3
1997	December	31.71	23.76	66.7
1998	January	33.05	23.60	0
1998	February	34.36	23.60	0
1998	March	36.19	23.58	11
1998	April	36.53	25.62	61.4
1998	May	34.19	25.20	201
1998	June	30.15	23.32	809.3
1998	July	29.16	23.61	752.9
1998	August	29.75	23.94	433.6
1998	September	29.23	23.27	571.3
1998	October	29.72	22.83	452.8
1998	November	31.46	23.07	109.4
1998	December	30.97	22.86	33
1999	January	32.37	21.49	0
1999	February	34.48	23.30	22.8
1999	March	35.50	24.47	0
1999	April	33.41	25.59	39
1999	May	30.74	24.76	430.5
1999	June	29.50	22.96	500.2
1999	July	28.37	22.94	823.3
1999	August	29.78	23.65	260.1
1999	September	31.56	23.41	28.4
1999	October	30.47	23.17	506.2
1999	November	31.37	22.76	9.1
1999	December	31.62	22.70	0
2000	January	32.92	23.22	0
2000	February	33.35	22.79	4.6
2000	March	35.63	23.84	0
2000	April	34.03	24.63	67.9
2000	May	33.74	24.43	117.2
2000	June	29.62	22.76	602
2000	July	29.78	22.47	353.8
2000	August	29.15	22.56	518.8
2000	September	30.72	23.03	198.1
2000	October	30.70	22.68	262.2
2000	November	32.16	23.10	41.3
2000	December	31.11	22.03	8
2001	January	32.60	23.18	0
2001	February	34.50	22.93	12.2
2001	March	34.78	23.99	4.4
2001	April	34.19	24.75	243.1
2001	May	32.28	24.49	192.6

2001	June	29.30	23.07	676.2
2001	July	29.02	22.74	477.7
2001	August	29.28	23.15	256.2
2001	September	30.78	23.17	206.1
2001	October	30.74	22.99	215.4
2001	November	31.59	23.10	116.2
2001	December	31.31	22.19	0
2002	January	32.771	22.716	0
2002	February	34.268	22.993	0
2002	March	36.258	24.132	16.3
2002	April	35.037	24.763	50.8
2002	May	32.552	24.526	308.4
2002	June	29.950	23.307	533.5
2002	July	29.803	23.065	354.2
2002	August	28.926	22.948	506.6
2002	September	31.097	22.987	124
2002	October	30.787	23.219	387.7
2002	November	31.773	23.360	22.1
2002	December	32.274	22.139	0
2003	January	33.19	22.88	0
2003	February	34.75	23.57	162.1
2003	March	34.55	24.07	94.8
2003	April	34.56	24.97	23.8
2003	May	34.02	25.53	40.3
2003	June	30.86	23.81	570.6
2003	July	29.49	22.89	492.6
2003	August	30.05	23.38	490.1
2003	September	30.93	22.64	53.7
2003	October	30.81	23.09	276.8
2003	November	31.54	23.97	18.2
2003	December	32.19	21.96	0
2004	January	33.35	22.27	0
2004	February	35.22	22.47	0
2004	March	36.50	24.19	8.6
2004	April	34.77	25.21	60.2
2004	May	30.40	23.65	578.7
2004	June	29.63	23.08	786
2004	July	29.25	22.98	369.6
2004	August	29.51	23.12	386.9
2004	September	30.80	23.58	208.8
2004	October	31.35	23.38	424.7
2004	November	31.14	23.57	71.7
2004	December	32.10	22.65	0
2005	January	33.17	22.56	7.6
2005	February	35.11	22.33	0
2005	March	35.73	24.59	0

2005	April	33.72	24.80	171.4
2005	May	33.59	25.01	89.2
2005	June	29.94	23.55	711.4
2005	July	28.67	23.03	727.5
2005	August	29.92	23.29	346.5
2005	September	29.38	23.35	416.1

Table S2.

File for executing model run, the 'Schedule' file in CENTURY. Blocks #1-4 simulate the land-use scenario, i.e., the 'spin-up,' prior to the start of the experimental modeling. Block #5 simulates the first run in Experiment #1 on effects of cropping system for the treatment of 100% Annuals (Banana, plantain).

```
 1          Starting year
2102        Last year
kerala.100          Site file name
0           Labeling type
-1          Labeling year
-1.00       Microcosm
-1          CO2 Systems
0           pH effect
-1          Soil warming
0           N input scalar option
0           OMAD scalar option
0           Climate scalar option
2           Initial system
           Initial crop
LUQD        Initial tree

Year Month Option
1           Block #   Tropical Semi-Evergreen
1800        Last year
1           Repeats # years
800         Output starting year
8           Output month
12          Output interval
S           Weather choice
  1    1 TREE
LUQD
  1    1 TFST
  1   12 TLST
-999 -999 X

2           Block #   Slash and burn forest
1901        Last year
1           Repeats # years
1901        Output starting year
1           Output month
1          Output interval
S           Weather choice
  1    1 TREE
LUQD
  1    1 TFST
  1   12 FIRE
```

```
M
  1   12 TREM
SLASH
  1   12 TLST
-999 -999 X

3           Block #   Homegarden
2000          Last year
1           Repeats # years
1902          Output starting year
8           Output month
12           Output interval
S           Weather choice
  1    1 CROP
BAN
  1    1 PLTM
  1    1 TREE
LUQD
  1    1 TFST
  1    2 OMAD
M
  1    4 IRRI
A25
  1    9 HARV
T
  1    9 LAST
  1    9 SENM
  1   12 TLST
-999 -999 X

4           Block #   End Homegarden
2001          Last year
1           Repeats # years
2001          Output starting year
1           Output month
1          Output interval
S           Weather choice
  1    1 TREE
LUQD
  1    1 TFST
  1   12 TREM
SLASH
  1   12 TLST
-999 -999 X

5           Block #   100% Annual crop (banana, plantain)
2102          Last year
1           Repeats # years
```

```
2002         Output starting year
8            Output month
12           Output interval
S            Weather choice
  1    1 CROP
BAN
  1    1 PLTM
  1    1 IRRI
A25
  1    2 FERT
MED
  1    2 OMAD
M
  1    2 IRRI
A25
  1    3 IRRI
A25
  1    4 IRRI
A25
  1    5 FERT
MED
  1    5 OMAD
M
  1    5 IRRI
A25
  1    6 IRRI
A25
  1    7 IRRI
A25
  1    8 IRRI
A25
  1    9 HARV
T
  1    9 LAST
  1    9 SENM
-999 -999 X
```

Table S3. Tree parameters in the Tree.100 file.
'LUQD' was the default tree species in the baseline run and all experiments. Bolding denotes parameters that differed among the 'treatment' levels in Experiment 2 regarding effects of tree species.

Tree traits	Tree 'species'				
	LUQA	LUQB	LUQC	LUQD	LUQE
'DECID'	2	2	2	2	2
'PRDX(2)'	0.5	0.5	0.5	0.5	0.5
'PPDF(1)'	30	30	30	30	30
'PPDF(2)'	45	45	45	45	45
'PPDF(3)'	1	1	1	1	1
'PPDF(4)'	2.5	2.5	2.5	2.5	2.5
'CERFOR(1,1,1)'	20	20	20	20	20
'CERFOR(1,1,2)'	700	700	700	700	700
'CERFOR(1,1,3)'	100	100	100	100	100
'CERFOR(1,2,1)'	35	35	35	35	35
'CERFOR(1,2,2)'	765	765	765	765	765
'CERFOR(1,2,3)'	129	129	129	129	129
'CERFOR(1,3,1)'	120	120	120	120	120
'CERFOR(1,3,2)'	1366	1366	1366	1366	1366
'CERFOR(1,3,3)'	92	92	92	92	92
'CERFOR(1,4,1)'	150	150	150	150	150
'CERFOR(1,4,2)'	2260	2260	2260	2260	2260
'CERFOR(1,4,3)'	183	183	183	183	183
'CERFOR(1,5,1)'	150	150	150	150	150
'CERFOR(1,5,2)'	2478	2478	2478	2478	2478
'CERFOR(1,5,3)'	175	175	175	175	175
'CERFOR(2,1,1)'	40	40	40	40	40
'CERFOR(2,1,2)'	700	700	700	700	700
'CERFOR(2,1,3)'	100	100	100	100	100
'CERFOR(2,2,1)'	60	60	60	60	60
'CERFOR(2,2,2)'	765	765	765	765	765
'CERFOR(2,2,3)'	129	129	129	129	129
'CERFOR(2,3,1)'	180	180	180	180	180
'CERFOR(2,3,2)'	1366	1366	1366	1366	1366
'CERFOR(2,3,3)'	92	92	92	92	92
'CERFOR(2,4,1)'	300	300	300	300	300
'CERFOR(2,4,2)'	2260	2260	2260	2260	2260
'CERFOR(2,4,3)'	183	183	183	183	183
'CERFOR(2,5,1)'	300	300	300	300	300
'CERFOR(2,5,2)'	2478	2478	2478	2478	2478
'CERFOR(2,5,3)'	175	175	175	175	175

'CERFOR(3,1,1)'	40	40	40	40	40
'CERFOR(3,1,2)'	700	700	700	700	700
'CERFOR(3,1,3)'	100	100	100	100	100
'CERFOR(3,2,1)'	76	76	76	76	76
'CERFOR(3,2,2)'	765	765	765	765	765
'CERFOR(3,2,3)'	129	129	129	129	129
'CERFOR(3,3,1)'	84	84	84	84	84
'CERFOR(3,3,2)'	1366	1366	1366	1366	1366
'CERFOR(3,3,3)'	92	92	92	92	92
'CERFOR(3,4,1)'	155	155	155	155	155
'CERFOR(3,4,2)'	2260	2260	2260	2260	2260
'CERFOR(3,4,3)'	183	183	183	183	183
'CERFOR(3,5,1)'	155	155	155	155	155
'CERFOR(3,5,2)'	2478	2478	2478	2478	2478
'CERFOR(3,5,3)'	175	175	175	175	175
'DECW1'	1.5	1.5	1.5	1.5	1.5
'DECW2'	0.5	0.5	0.5	0.5	0.5
'DECW3'	0.6	0.6	0.6	0.6	0.6
'FCFRAC(1,1)'	0.25	0.25	0.25	0.25	0.25
'FCFRAC(2,1)'	0.25	0.25	0.25	0.25	0.25
'FCFRAC(3,1)'	0.1	0.1	0.1	0.1	0.1
'FCFRAC(4,1)'	0.3	0.3	0.3	0.3	0.3
'FCFRAC(5,1)'	0.1	0.1	0.1	0.1	0.1
'FCFRAC(1,2)'	0.34	0.34	0.34	0.34	0.34
'FCFRAC(2,2)'	0.25	0.25	0.25	0.25	0.25
'FCFRAC(3,2)'	0.11	0.11	0.11	0.11	0.11
'FCFRAC(4,2)'	0.22	0.22	0.22	0.22	0.22
'FCFRAC(5,2)'	0.08	0.08	0.08	0.08	0.08
'TFRTCN(1)'	0.4	0.4	0.4	0.4	0.4
'TFRTCN(2)'	0.25	0.25	0.25	0.25	0.25
'TFRTCW(1)'	0.36	0.36	0.36	0.36	0.36
'TFRTCW(2)'	0.3	0.3	0.3	0.3	0.3
'LEAFDR(1)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(2)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(3)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(4)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(5)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(6)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(7)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(8)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(9)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(10)'	0.07	0.07	0.07	0.07	0.07
'LEAFDR(11)'	0.07	0.07	0.07	0.07	0.07

'LEAFDR(12)'	0.07	0.07	0.07	0.07	0.07
'BTOLAI'	0.007	0.007	0.007	0.007	0.007
'KLAI'	1	1	1	1	1
'LAITOP'	-0.47	-0.47	-0.47	-0.47	-0.47
'MAXLAI'	20	20	20	20	20
'MAXLDR'	1	1	1	1	1
'FORRTF(1)'	0.2	0.2	0.2	0.2	0.2
'FORRTF(2)'	0	0	0	0	0
'FORRTF(3)'	0	0	0	0	0
'SAPK'	1	1	1	1	1
'SWOLD'	0	0	0	0	0
'WDLIG(1)'	**0.05**	**0.1**	**0.2**	**0.15**	**0.25**
'WDLIG(2)'	**0.18**	**0.22**	**0.32**	**0.28**	**0.36**
'WDLIG(3)'	**0.25**	**0.3**	**0.4**	**0.35**	**0.45**
'WDLIG(4)'	**0.25**	**0.3**	**0.4**	**0.35**	**0.45**
'WDLIG(5)'	**0.25**	**0.3**	**0.4**	**0.35**	**0.45**
'WOODDR(1)'	0.8	0.8	0.8	0.8	0.8
'WOODDR(2)'	0.03	0.03	0.03	0.03	0.03
'WOODDR(3)'	0.01	0.01	0.01	0.01	0.01
'WOODDR(4)'	0.002	0.002	0.002	0.002	0.002
'WOODDR(5)'	0.004	0.004	0.004	0.004	0.004
'SNFXMX(2)'	0	0	0	0	0
'DEL13C'	0	0	0	0	0
'CO2IPR'	1.2	1.2	1.2	1.2	1.2
'CO2ITR'	0.8	0.8	0.8	0.8	0.8
'CO2ICE(1,1,1)'	1.2	1.2	1.2	1.2	1.2
'CO2ICE(1,1,2)'	1	1	1	1	1
'CO2ICE(1,1,3)'	1	1	1	1	1
'CO2ICE(1,2,1)'	1.2	1.2	1.2	1.2	1.2
'CO2ICE(1,2,2)'	1	1	1	1	1
'CO2ICE(1,2,3)'	1	1	1	1	1
'CO2IRS'	1	1	1	1	1
'BASFC2'	1	1	1	1	1
'BASFCT'	1	1	1	1	1
'SITPOT'	1	1	1	1	1
'MAXNP'	13.5	13.5	13.5	13.5	13.5
'KMRSP(2)'	0	0	0	0	0
'FKMRSPMX(1)'	0	0	0	0	0
'FKMRSPMX(2)'	0	0	0	0	0
'FKMRSPMX(3)'	0	0	0	0	0
'FKMRSPMX(4)'	0	0	0	0	0
'FKMRSPMX(5)'	0	0	0	0	0
'NO3PREF(2)'	0.5	0.5	0.5	0.5	0.5

'TLAYPG'	6	6	6	6	6
'TMIX'	0.5	0.5	0.5	0.5	0.5
'TMPLFF'	7	7	7	7	7
'TMPLFS'	10	10	10	10	10

Table S4. Crop Parameters in the 'Crop.100' file.

Parameter	BAN, banana (plantain)
'PRDX(1)'	0.5
'PPDF(1)'	30
'PPDF(2)'	45
'PPDF(3)'	1
'PPDF(4)'	2.5
'BIOFLG'	0
'BIOK5'	3
'PLTMRF'	0.1
'FULCAN'	150
'FRTCINDX'	2
'FRTC(1)'	0.1
'FRTC(2)'	0.25
'FRTC(3)'	3
'FRTC(4)'	0.2
'FRTC(5)'	0.1
'CFRTCN(1)'	0.4
'CFRTCN(2)'	0.25
'CFRTCW(1)'	0.1
'CFRTCW(2)'	0.25
'BIOMAX'	700
'PRAMN(1,1)'	45
'PRAMN(2,1)'	150
'PRAMN(3,1)'	190
'PRAMN(1,2)'	45
'PRAMN(2,2)'	150
'PRAMN(3,2)'	190
'PRAMX(1,1)'	49
'PRAMX(2,1)'	230
'PRAMX(3,1)'	230
'PRAMX(1,2)'	49
'PRAMX(2,2)'	230
'PRAMX(3,2)'	230
'PRBMN(1,1)'	45
'PRBMN(2,1)'	390
'PRBMN(3,1)'	340
'PRBMN(1,2)'	0
'PRBMN(2,2)'	0
'PRBMN(3,2)'	0
'PRBMX(1,1)'	60
'PRBMX(2,1)'	240
'PRBMX(3,1)'	240
'PRBMX(1,2)'	0

'PRBMX(2,2)'	0
'PRBMX(3,2)'	0
'FLIGNI(1,1)'	0.1
'FLIGNI(2,1)'	0
'FLIGNI(1,2)'	0.06
'FLIGNI(2,2)'	0
'HIMAX'	0.35
'HIWSF'	0
'HIMON(1)'	2
'HIMON(2)'	1
'EFRGRN(1)'	0.3
'EFRGRN(2)'	0.3
'EFRGRN(3)'	0.3
'VLOSSP'	0.04
'FSDETH(1)'	0.1
'FSDETH(2)'	0.0833
'FSDETH(3)'	0
'FSDETH(4)'	700
'FALLRT'	0.015
'RDR'	0.05
'RTDTMP'	2
'CRPRTF(1)'	0.4
'CRPRTF(2)'	0.4
'CRPRTF(3)'	0.4
'SNFXMX(1)'	0.003
'DEL13C'	-15
'CO2IPR(1)'	1.2
'CO2ITR(1)'	0.8
'CO2ICE(1,1,1)'	1.2
'CO2ICE(1,1,2)'	1
'CO2ICE(1,1,3)'	1
'CO2ICE(1,2,1)'	1.2
'CO2ICE(1,2,2)'	1
'CO2ICE(1,2,3)'	1
'CO2IRS(1)'	1
'KMRSP(1)'	0
'CKMRSPMX(1)'	0
'CKMRSPMX(2)'	0
'NO3PREF(1)'	0.25
'CLAYPG'	4
'TMPGERM'	10
'DDHARV'	900
'TMPKILL'	7

Table S5. Climate parameters used in Experiment 3 on effects of increase in temperature. Point # refers to the order of the temperature increase, from lowest to highest. Bolding denotes parameters that differed among the 'treatment' levels. Point #1 values are based on the actual climate data, i.e., no warming effect.

Parameter	Point #				
	1	2	3	4	5
'PRECIP(1)'	0.22	0.22	0.22	0.22	0.22
'PRECIP(2)'	1.07	1.07	1.07	1.07	1.07
'PRECIP(3)'	1.15	1.15	1.15	1.15	1.15
'PRECIP(4)'	7.43	7.43	7.43	7.43	7.43
'PRECIP(5)'	18.19	18.19	18.19	18.19	18.19
'PRECIP(6)'	69.8	69.8	69.8	69.8	69.8
'PRECIP(7)'	65.19	65.19	65.19	65.19	65.19
'PRECIP(8)'	42.65	42.65	42.65	42.65	42.65
'PRECIP(9)'	23.87	23.87	23.87	23.87	23.87
'PRECIP(10)'	31.26	31.26	31.26	31.26	31.26
'PRECIP(11)'	9.32	9.32	9.32	9.32	9.32
'PRECIP(12)'	1.73	1.73	1.73	1.73	1.73
'PRCSTD(1)'	0.51	0.51	0.51	0.51	0.51
'PRCSTD(2)'	3.38	3.38	3.38	3.38	3.38
'PRCSTD(3)'	2.11	2.11	2.11	2.11	2.11
'PRCSTD(4)'	6.31	6.31	6.31	6.31	6.31
'PRCSTD(5)'	14.76	14.76	14.76	14.76	14.76
'PRCSTD(6)'	19.03	19.03	19.03	19.03	19.03
'PRCSTD(7)'	25.84	25.84	25.84	25.84	25.84
'PRCSTD(8)'	12.11	12.11	12.11	12.11	12.11
'PRCSTD(9)'	17.69	17.69	17.69	17.69	17.69
'PRCSTD(10)'	11.22	11.22	11.22	11.22	11.22
'PRCSTD(11)'	9.4	9.4	9.4	9.4	9.4
'PRCSTD(12)'	2.38	2.38	2.38	2.38	2.38
'PRCSKW(1)'	2.67	2.67	2.67	2.67	2.67
'PRCSKW(2)'	4.45	4.45	4.45	4.45	4.45
'PRCSKW(3)'	3.14	3.14	3.14	3.14	3.14
'PRCSKW(4)'	1.16	1.16	1.16	1.16	1.16
'PRCSKW(5)'	1.33	1.33	1.33	1.33	1.33
'PRCSKW(6)'	0.13	0.13	0.13	0.13	0.13
'PRCSKW(7)'	0.74	0.74	0.74	0.74	0.74
'PRCSKW(8)'	0.33	0.33	0.33	0.33	0.33
'PRCSKW(9)'	1.19	1.19	1.19	1.19	1.19
'PRCSKW(10)'	-0.27	-0.27	-0.27	-0.27	-0.27

'PRCSKW(11)'	1.53	1.53	1.53	1.53	1.53
'PRCSKW(12)'	1.28	1.28	1.28	1.28	1.28
'TMN2M(1)'	**22.33**	**23.33**	**24.33**	**26.33**	**28.33**
'TMN2M(2)'	**22.68**	**23.68**	**24.68**	**26.68**	**28.68**
'TMN2M(3)'	**23.97**	**24.97**	**25.97**	**27.97**	**29.97**
'TMN2M(4)'	**25.04**	**26.04**	**27.04**	**29.04**	**31.04**
'TMN2M(5)'	**24.81**	**25.81**	**26.81**	**29.81**	**30.81**
'TMN2M(6)'	**23.33**	**24.33**	**25.33**	**27.33**	**29.33**
'TMN2M(7)'	**22.97**	**23.97**	**24.97**	**26.97**	**28.97**
'TMN2M(8)'	**23.25**	**24.25**	**25.25**	**27.25**	**29.25**
'TMN2M(9)'	**23.25**	**24.25**	**25.25**	**27.25**	**29.25**
'TMN2M(10)'	**23.06**	**24.06**	**25.06**	**27.06**	**29.06**
'TMN2M(11)'	**22.98**	**23.98**	**24.98**	**26.98**	**28.98**
'TMN2M(12)'	**22.54**	**23.54**	**24.54**	**26.54**	**28.54**
'TMX2M(1)'	**32.88**	**33.88**	**34.88**	**36.88**	**38.88**
'TMX2M(2)'	**34.75**	**35.75**	**36.75**	**38.75**	**40.75**
'TMX2M(3)'	**35.79**	**36.79**	**37.79**	**39.79**	**41.79**
'TMX2M(4)'	**35.13**	**36.13**	**37.13**	**39.13**	**41.13**
'TMX2M(5)'	**33.58**	**34.58**	**35.58**	**37.58**	**39.58**
'TMX2M(6)'	**30.00**	**31.00**	**32.00**	**34.00**	**36.00**
'TMX2M(7)'	**29.09**	**30.09**	**31.09**	**33.09**	**35.09**
'TMX2M(8)'	**29.49**	**30.49**	**31.49**	**33.49**	**35.49**
'TMX2M(9)'	**30.53**	**31.53**	**32.53**	**34.53**	**36.53**
'TMX2M(10)'	**31.14**	**32.14**	**33.14**	**35.14**	**37.14**
'TMX2M(11)'	**31.63**	**32.63**	**33.63**	**35.63**	**37.63**
'TMX2M(12)'	**31.81**	**32.81**	**33.81**	**35.81**	**37.81**

Table S6. Site parameters used in Experiment 4 on the effect of soil type. Point # refers to the order of increase in sand content, from lowest to highest. Bolding denotes parameters that differed among the 'treatment' levels.

Parameter	Point #				
	1	2	3	4	5
'IVAUTO'	1	1	1	1	1
'NELEM'	1	1	1	1	1
'SITLAT'	10.26	10.26	10.26	10.26	10.26
'SITLNG'	83.59	83.59	83.59	83.59	83.59
'SAND'	**0.7**	**0.5**	**0.3**	**0.2**	**0.1**
'SILT'	**0.2**	**0.3**	**0.29**	**0.3**	**0.3**
'CLAY'	**0.1**	**0.2**	**0.41**	**0.5**	**0.6**
'ROCK'	0	0	0	0	0
'BULKD'	0.64	0.64	0.64	0.64	0.64
'NLAYER'	4	4	4	4	4
'NLAYPG'	4	4	4	4	4
'DRAIN'	1	1	1	1	1
'BASEF'	0.2	0.2	0.2	0.2	0.2
'STORMF'	0.8	0.8	0.8	0.8	0.8
'PRECRO'	8	8	8	8	8
'FRACRO'	0.15	0.15	0.15	0.15	0.15
'SWFLAG'	1	1	1	1	1
'AWILT(1)'	0.2	0.2	0.2	0.2	0.2
'AWILT(2)'	0.2	0.2	0.2	0.2	0.2
'AWILT(3)'	0.2	0.2	0.2	0.2	0.2
'AWILT(4)'	0.2	0.2	0.2	0.2	0.2
'AWILT(5)'	0.2	0.2	0.2	0.2	0.2
'AWILT(6)'	0.2	0.2	0.2	0.2	0.2
'AWILT(7)'	0.2	0.2	0.2	0.2	0.2
'AWILT(8)'	0.2	0.2	0.2	0.2	0.2
'AWILT(9)'	0.2	0.2	0.2	0.2	0.2
'AWILT(10)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(1)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(2)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(3)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(4)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(5)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(6)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(7)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(8)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(9)'	0.3	0.3	0.3	0.3	0.3
'AFIEL(10)'	0	0	0	0	0

'PH'	4.5	4.5	4.5	4.5	4.5
'PSLSRB'	1	1	1	1	1
'SORPMX'	20	20	20	20	20