

Supplementary table and figures

Table S1. Concentration of mineral N in soil solution at 30 cm and 90 cm depth after heavy rainfall events. Values are mean \pm SD (n = 3). Different letters indicate significant differences ($p < 0.05$, Tukey HSD test) among vegetable beds at each date.

Date	Bed	30 cm				90 cm			
		NO_3^- [mg.L ⁻¹]		NH_4^+ [mg.L ⁻¹]		NO_3^- [mg.L ⁻¹]		NH_4^+ [mg.L ⁻¹]	
08/21/2020	B1E	4.34 \pm 1.2	ab	0.42 \pm 0.01	a	1.37 \pm 0.34	a	0.42 \pm 0.01	a
	B2E	1.47 \pm 0.62	bc	0.37 \pm 0.01	b	-		-	
	C	2.51 \pm 0.65	bc	0.38 \pm 0.01	b	0.55 \pm 0.32	a	0.42 \pm 0.01	a
	B2W	0.33 \pm 0.15	c	0.39 \pm 0.02	ab	-		-	
	B1W	6.25 \pm 2.46	a	0.42 \pm 0.01	a	1.17 \pm 0.95	a	0.43 \pm 0	a
10/05/2020	B1E	24.44 \pm 4.66	a	0.4 \pm 0.02	a	2.99 \pm 0.95	a	0.42 \pm 0.01	a
	B2E	6.87 \pm 0.49	bc	0.4 \pm 0.01	a	-		-	
	C	11.29 \pm 3.93	b	0.41 \pm 0.01	a	1.17 \pm 0.29	a	0.41 \pm 0	a
	B2W	1.67 \pm 0.78	c	0.4 \pm 0.01	a	-		-	
	B1W	23.08 \pm 0.32	a	0.42 \pm 0.01	a	1.8 \pm 0.86	a	0.42 \pm 0.01	a

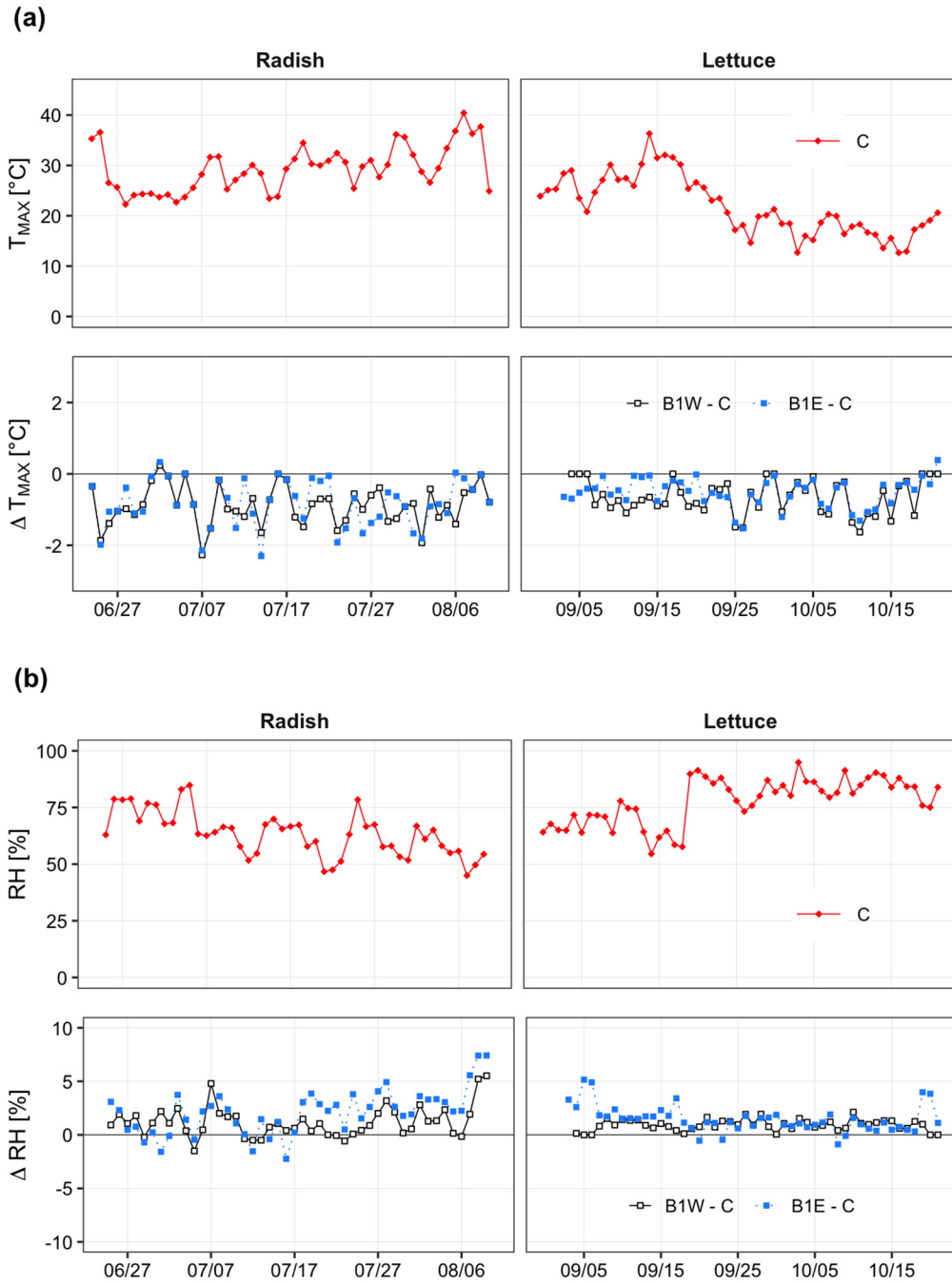


Figure S1. Evolution of daily maximum air temperature (a) and daily mean relative humidity (b) on the C bed and differences between the B1 and the C bed.

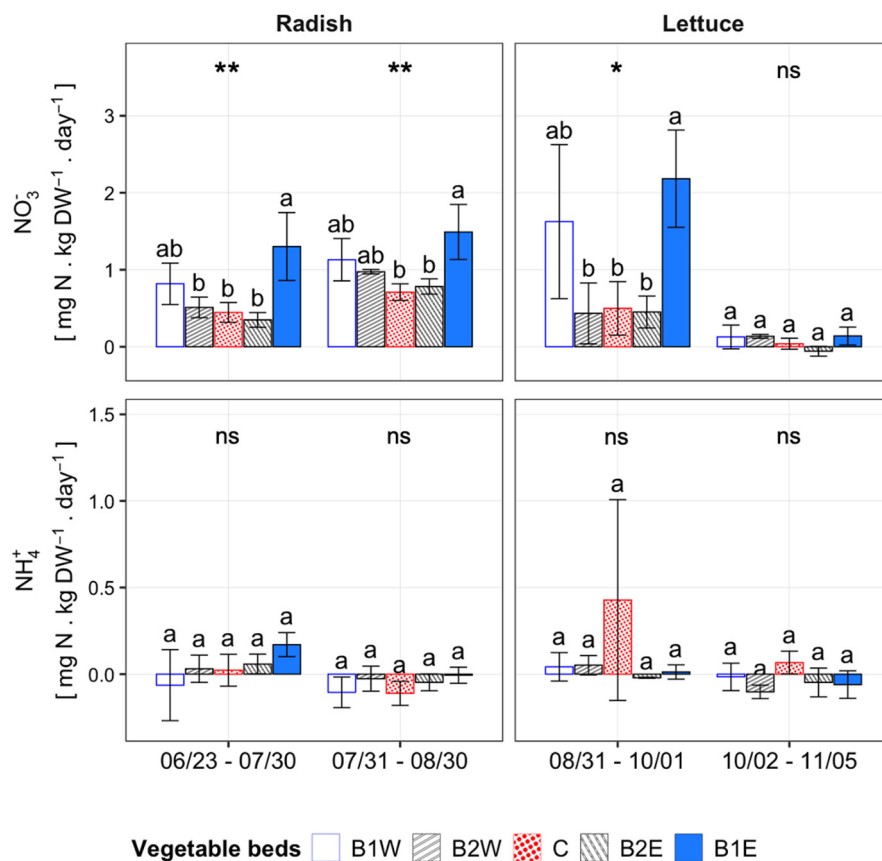


Figure S2. Nitrate and ammonium production rates in the upper soil layer (0-15 cm) in each vegetable bed during each growing season. Error bars represent the standard deviation of the mean ($n = 3$). Different letters indicate significant differences ($p < 0.05$, Tukey HSD test) among vegetable beds at each date (ns: not significant, * $p < 0.05$, ** $p < 0.01$).

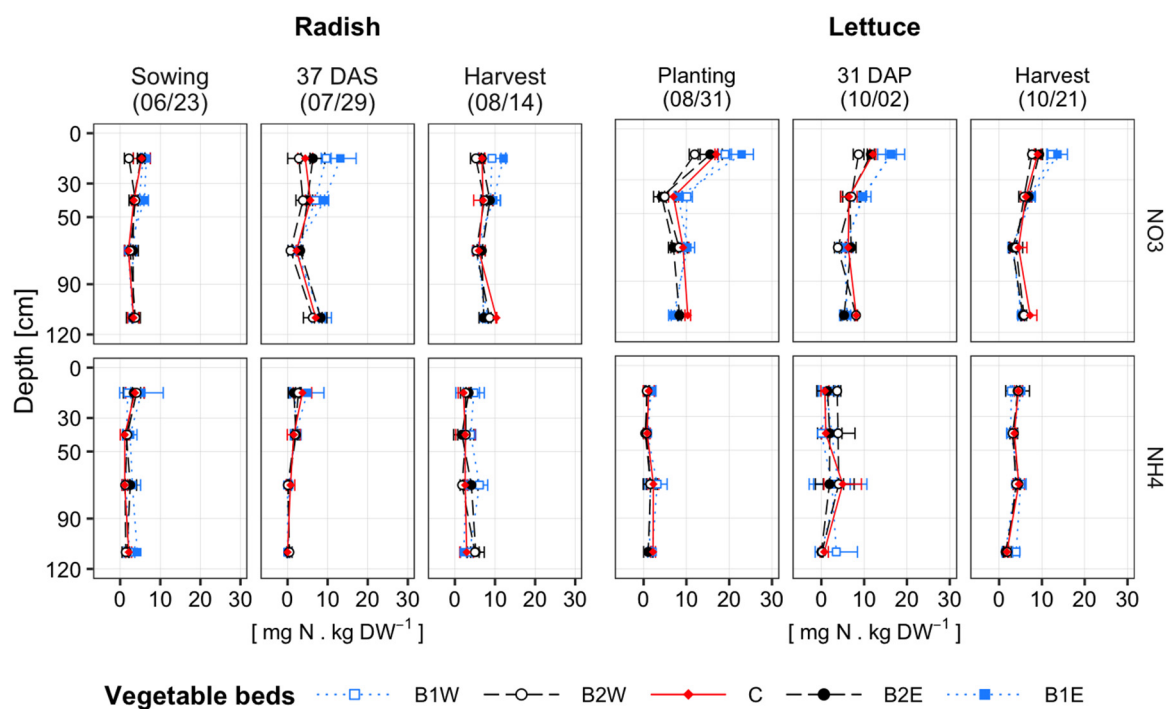


Figure S3. Evolution of the N mineral concentration in the soil profile at plantation, in the middle of the crop cycle (37 days after sowing (DAS) for radish, 31 days after planting (DAP) for lettuce) and at harvest during each growing season. Error bars represent the standard deviation of the mean ($n = 3$).

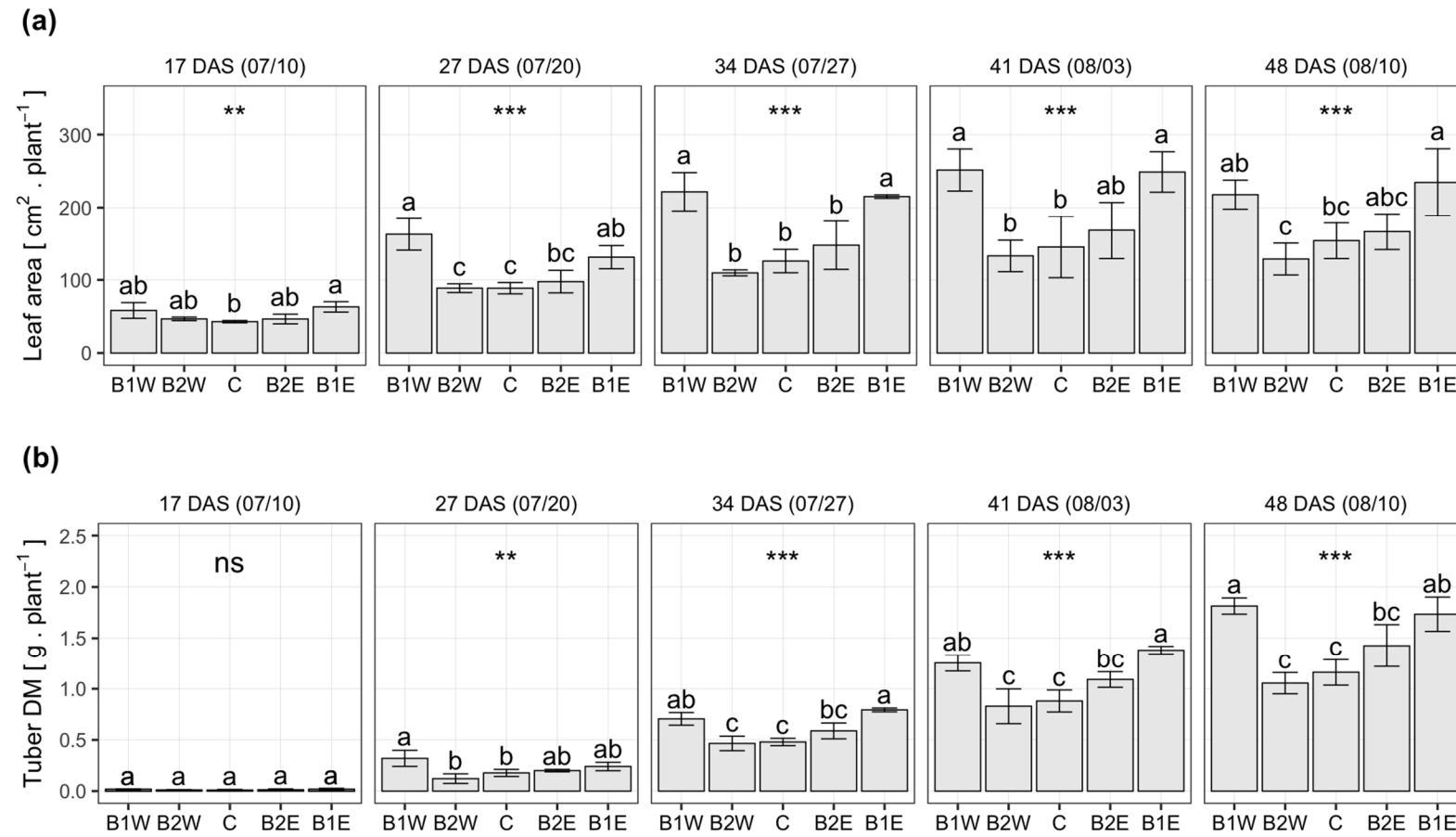


Figure S4. Evolution of the leaf area **(a)** and the tuber dry mass **(b)** of radish on each vegetable bed. Error bars represent the standard deviation of the mean ($n = 3$). Different letters indicate significant differences ($p < 0.05$, Tukey HSD test) among vegetable beds at each date (ns: not significant, ** $p < 0.01$, *** $p < 0.001$). DAS: days after sowing.

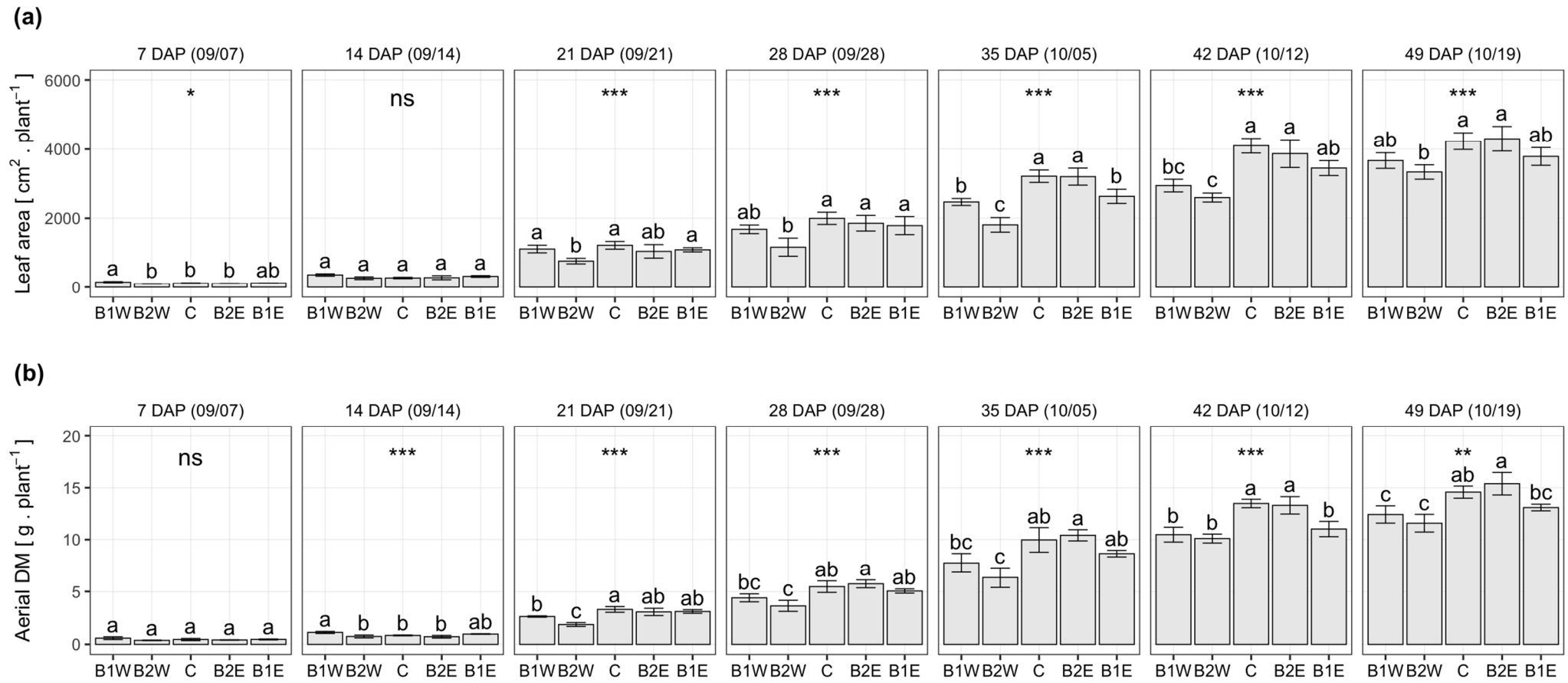


Figure S5. Evolution of the leaf area **(a)** and the aerial dry mass **(b)** of lettuce on each vegetable bed. Error bars represent the standard deviation of the mean ($n = 3$). Different letters indicate significant differences ($p < 0.05$, Tukey HSD test) among vegetable beds at each date (ns: not significant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$). DAP: days after planting.

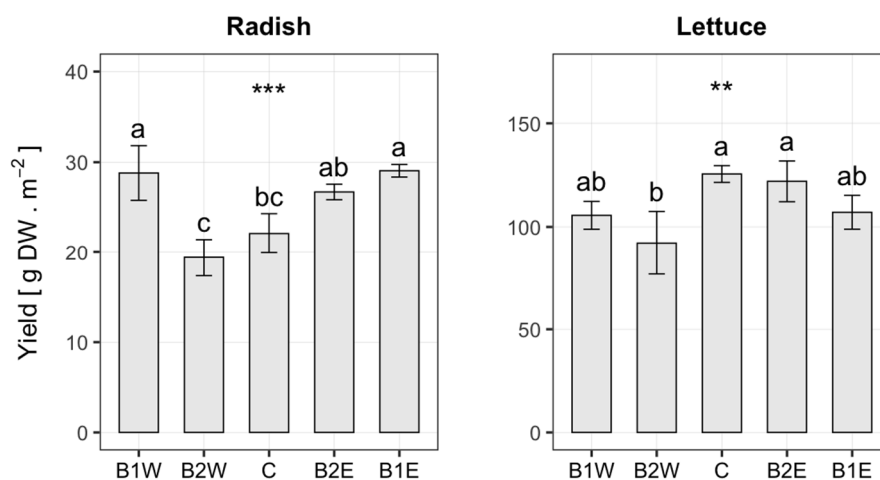


Figure S6. Yield of radish and lettuce on each vegetable bed. Error bars represent the standard deviation of the mean ($n = 3$). Different letters indicate significant differences ($p < 0.05$, Tukey HSD test) among vegetable beds (** $p < 0.01$, *** $p < 0.001$).