Table 9. Simple correlation (r) between sugarbeet sugar content (pounds per ton) and leaf blade and petiole nutrient concentration for the newest fully developed leaf sampled the third week in June, first week in July, and fourth week in July. Correlation r values when between -0.15 and 0.15 are not considered significant at $P \leq 0.10$.

	N	P	K	Ca	Mg	S	B	Cu	Fe	Mn	Zn
Time 1 Blade	-0.02	-0.27	0.41	-0.10	-0.38	-0.54	0.52	0.08	0.07	-0.05	0.33
Time 1 Petiole	-0.07	-0.44	0.30	-0.20	-0.32	-0.25	-0.18	0.15	-0.05	-0.10	0.04
Time 2 Blade	-0.47	-0.58	0.26	0.01	-0.40	-0.21	0.62	0.33	-0.43	-0.15	0.01
Time 2 Petiole	-0.62	-0.45	-0.03	-0.13	-0.62	-0.27	-0.16	0.07	-0.40	-0.26	-0.12
Time 3 Blade	-0.64	-0.59	0.57	0.46	-0.21	-0.47	0.51	0.38	-0.01	0.32	0.02
Time 3 Petiole	-0.59	-0.38	0.23	0.32	-0.59	-0.23	0.30	0.19	0.45	0.30	0.01

Table 10. Simple correlation (r) between sugarbeet sugar production (pounds per acre) and leaf blade and petiole nutrient concentration for the newest fully developed leaf sampled the third week in June, first week in July, and fourth week in July. Correlation r values when between -0.15 and 0.15 are not considered significant at $P \leq 0.10$.

	N	P	K	Ca	Mg	S	B	Cu	Fe	Mn	Zn
Time 1 Blade	0.52	0.06	0.29	0.43	0.14	-0.12	0.40	-0.35	0.64	0.41	0.38
Time 1 Petiole	0.51	-0.39	0.42	0.39	0.19	0.15	0.32	-0.09	0.49	0.40	0.43
Time 2 Blade	-0.04	-0.15	-0.10	-0.45	-0.71	0.43	0.43	0.46	-0.50	-0.47	0.08
Time 2 Petiole	-0.59	-0.20	-0.50	-0.38	-0.77	-0.07	0.30	0.11	-0.66	-0.56	-0.34
Time 3 Blade	-0.43	-0.53	0.33	0.03	-0.39	0.05	0.58	0.20	-0.37	0.05	0.43
Time 3 Petiole	-0.63	-0.07	-0.28	0.12	-0.69	-0.23	0.47	0.01	0.17	-0.02	-0.26

Table 11. Correlation between leaf blade and petiole nutrient concentration across locations and sample time with the soil test concentration for the same nutrient for soil samples collected at 0-6 and 6-24 inch soil depths.

Nutrient	Plant Part	0-6" Soil Test	6-24" Soil Test
Nitrogen	Leaf Blade	0.56	0.64
	Petiole	0.69	0.69
Phosphorus	Leaf Blade	0.52	0.26
	Petiole	0.65	0.52
Potassium	Leaf Blade	0.72	0.69
	Petiole	0.63	0.49
Calcium	Leaf Blade	-0.12	0.13
	Petiole	-0.06	0.13
Magnesium	Leaf Blade	-0.27	-0.36
	Petiole	-0.08	-0.20
Sulfur	Leaf Blade	0.40	-0.21
	Petiole	0.45	0.31
Boron	Leaf Blade	0.30	0.59
	Petiole	-0.01	-0.13
Copper	Leaf Blade	0.54	0.23
	Petiole	0.17	0.40
Iron	Leaf Blade	0.10	0.09
	Petiole	0.20	0.16
Manganese	Leaf Blade	-0.01	0.13
	Petiole	0.20	0.13
Zinc	Leaf Blade	0.67	0.44
	Petiole	0.03	0.17

Correlations between -0.50 and 0.50 are not significant at $P \leq 0.10$

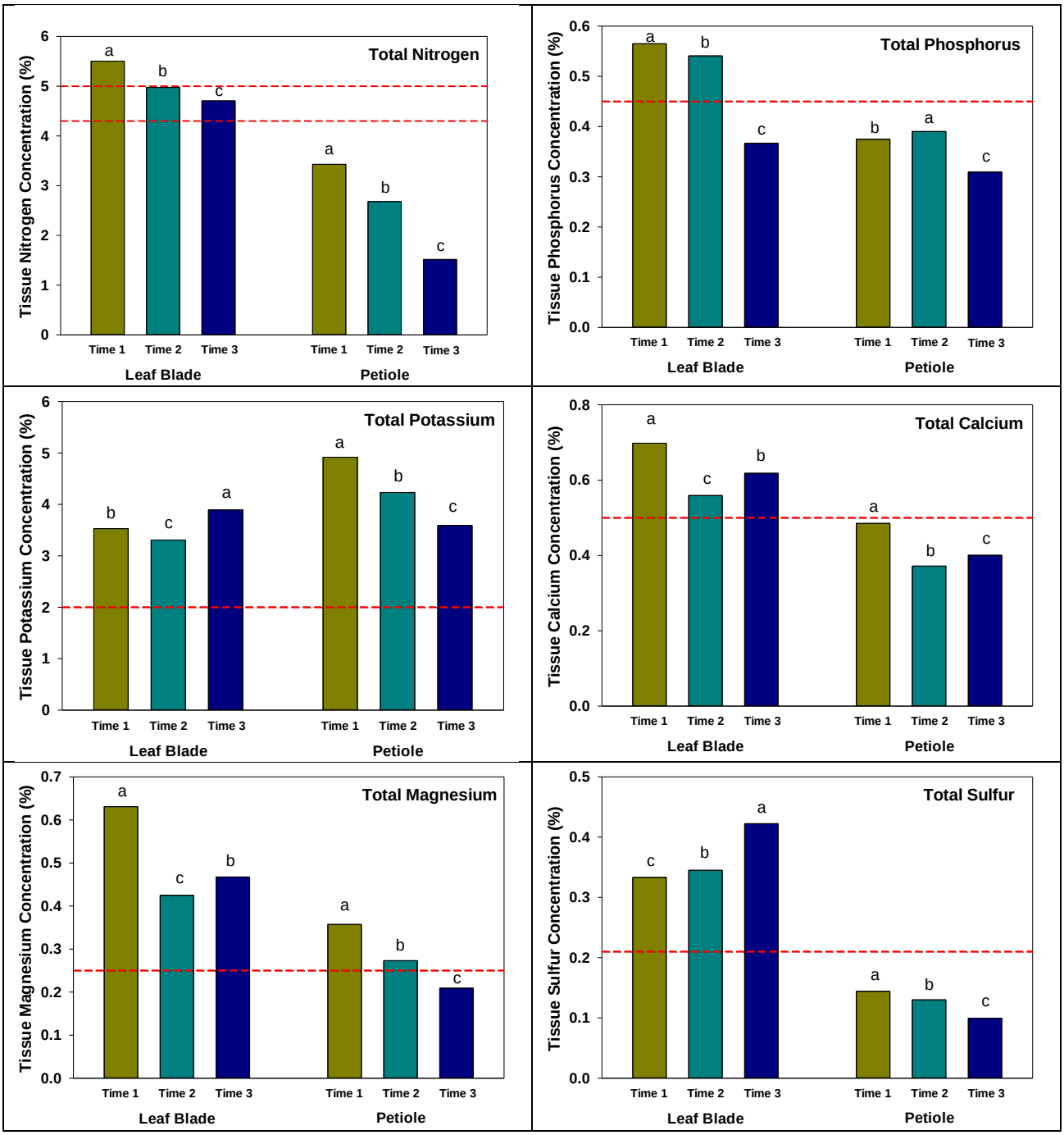

Figure 1. Summary of the impact of time on sugarbeet total macronutrient concentrations for leaf blade and petiole samples collected from six sugarbeet varieties. Letters denote significance among sampling times for leaf blade or petiole samples at $P \leq 0.10$. Horizontal dashed lines represent the upper and lower end of the sufficiency range for leaf blade samples according to Bryson et al., 2014. A single dashed line represents the low end of the sufficiency range.

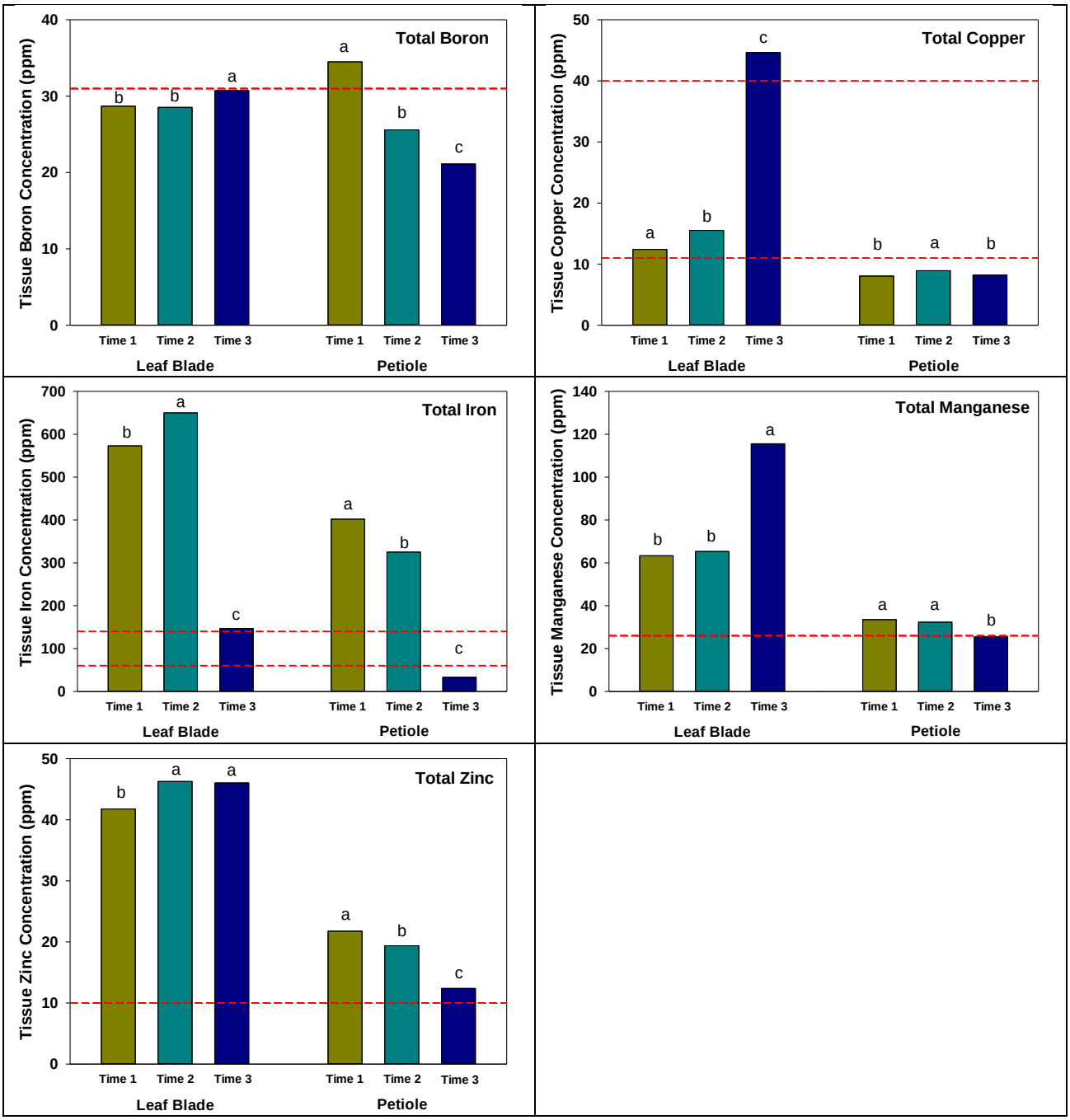

Figure 2. Summary of the impact of time on sugarbeet total micronutrient concentrations for leaf blade and petiole samples collected from six sugarbeet varieties. Letters denote significance among sampling times for leaf blade or petiole samples at $P \leq 0.10$. Horizontal dashed lines represent the upper and lower end of the sufficiency range for leaf blade samples according to Bryson et al., 2014. A single dashed line represents the low end of the sufficiency range.