Calibration Report: Low N Sedimentary Site Base Case

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Contents

List of Figures

List of Tables

Soil Solution Results

Table 1: Average Soil Solution Concentrations of Reliable Months (2005-2006)

	$\\mu$mol/L															
Soil Layer	Ca	Mg	K	Na	NO3	NH4	SO4	Cl	PO4	DOC	Al	Si	H+	pH	R	HR
Layer 1	13.8	18.3	17.2	45.8	1.955	1.774	24.3	55.2	0.975	393	0.01503	12.3	17.28	4.76	40.8	15.3
Layer 2	16.4	22.5	19.1	54.8	1.408	1.002	25.3	63.0	0.853	630	0.02900	29.5	24.48	4.61	62.3	27.8
Layer 3	22.9	27.0	22.2	49.5	0.979	0.674	25.3	69.1	0.666	691	0.01854	42.2	19.14	4.72	70.6	28.1
Layer 4	9.2	16.0	14.6	47.5	0.578	0.717	12.9	65.6	0.371	421	0.02401	51.2	20.82	4.68	41.9	18.2
Layer 5	12.8	21.1	14.9	50.5	0.508	1.255	12.7	71.1	0.179	421	0.00621	53.2	9.05	5.04	46.4	13.7
Layer 6	11.9	19.1	16.9	53.1	0.499	1.495	12.7	76.5	0.210	384	0.00764	56.9	10.61	4.97	41.8	13.0
Layer 7	15.2	20.8	15.8	59.7	0.505	2.013	12.7	82.6	0.253	428	0.00474	61.3	7.33	5.14	48.3	12.8
Layer 8	14.9	19.2	18.0	67.3	0.518	2.398	12.7	87.0	0.209	424	0.00364	63.7	5.91	5.23	49.0	11.7

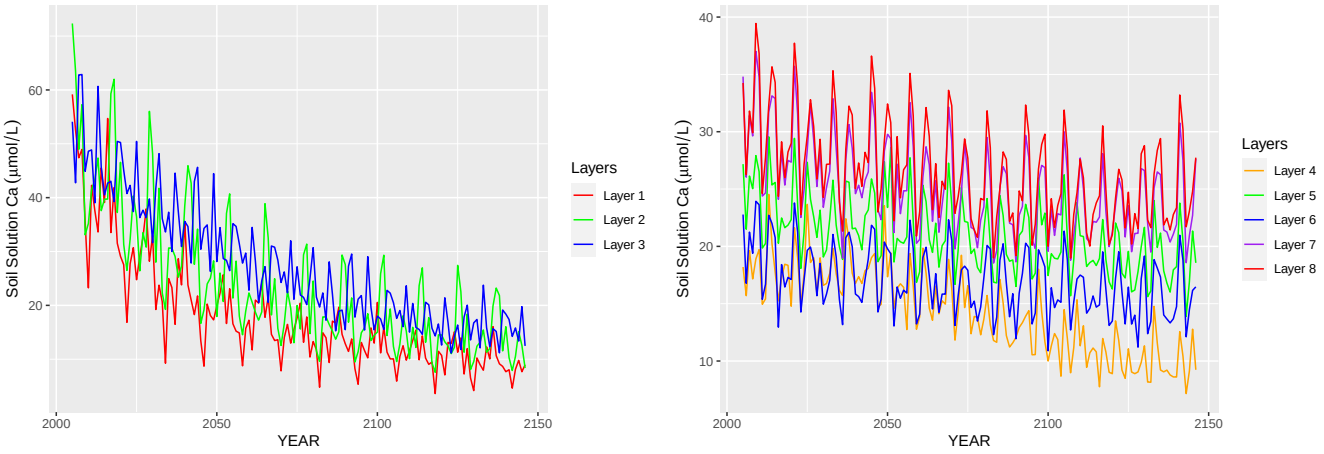


Figure 1: Monthly Calcium Concentrations by Soil Layer

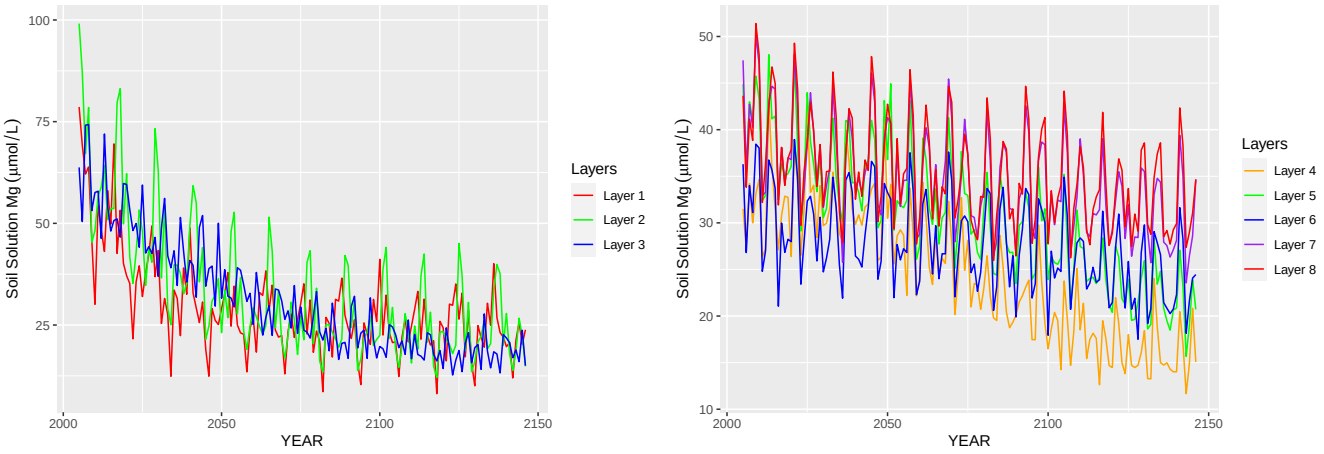


Figure 2: Monthly Magnesium Concentrations by Soil Layer

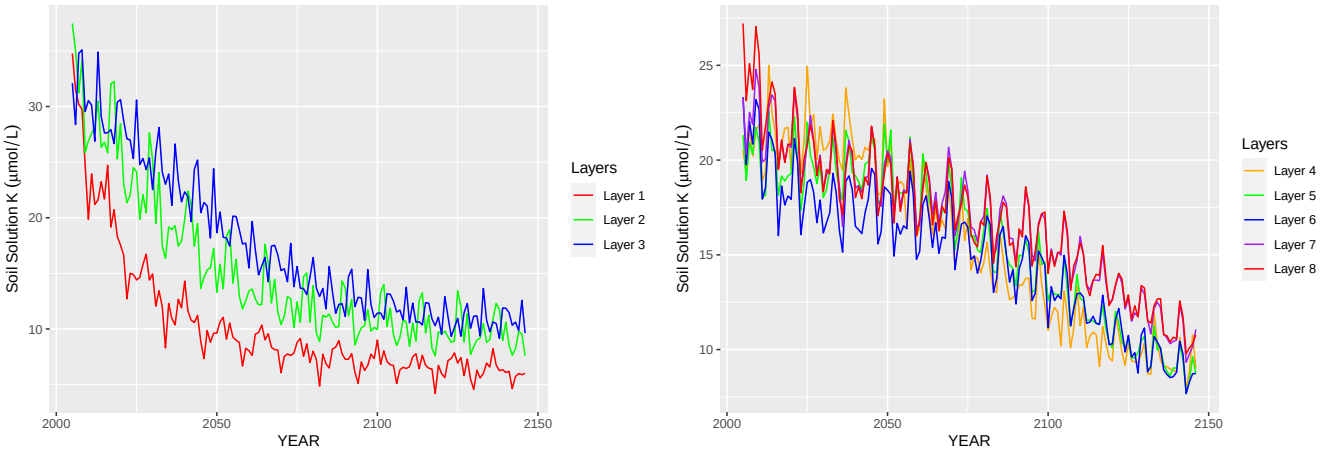


Figure 3: Monthly Potassium Concentrations by Soil Layer

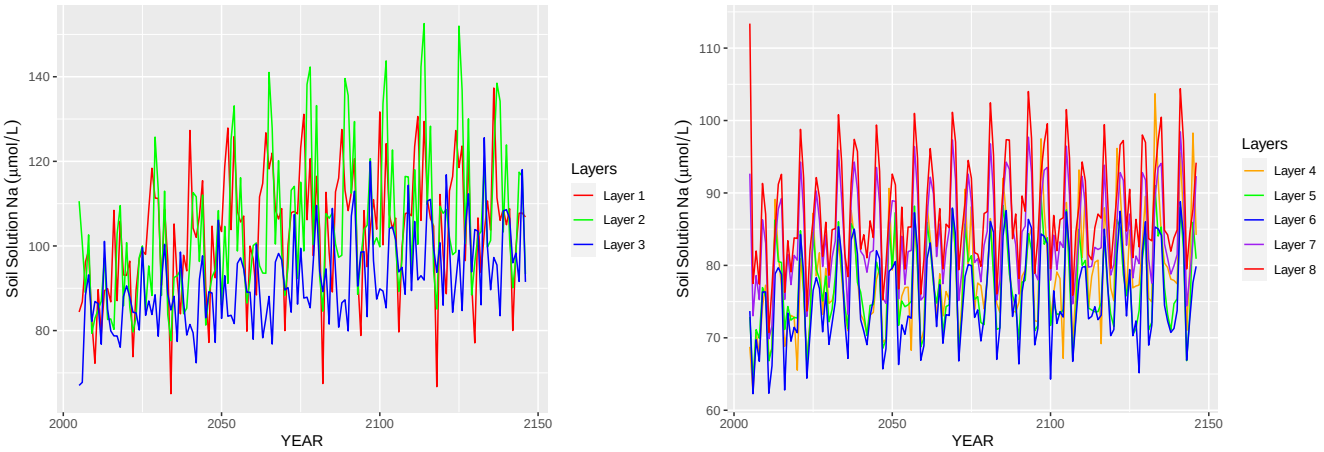


Figure 4: Monthly Sodium Concentrations by Soil Layer

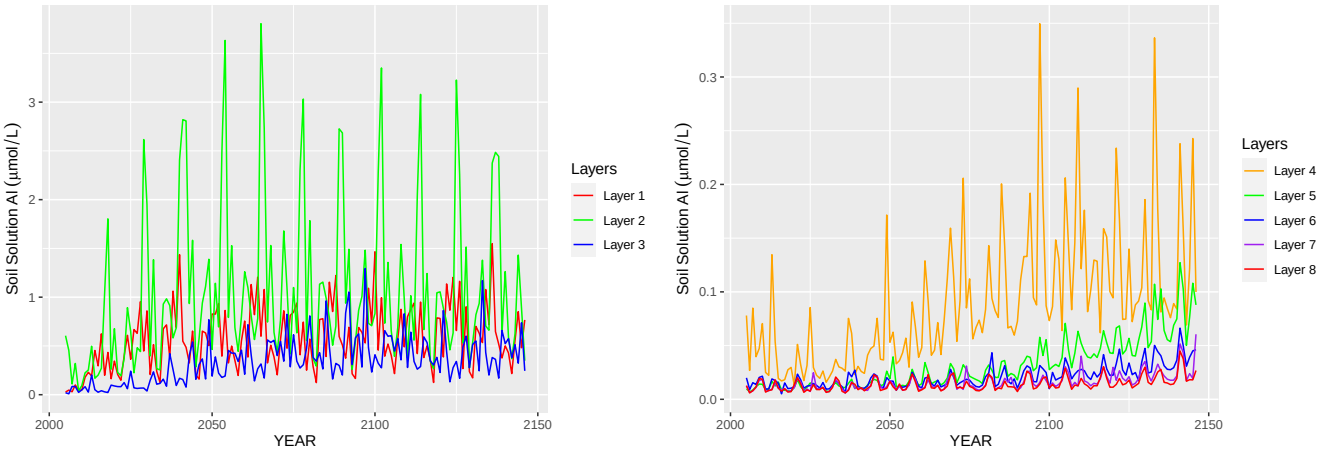


Figure 5: Monthly Aluminum Concentrations by Soil Layer

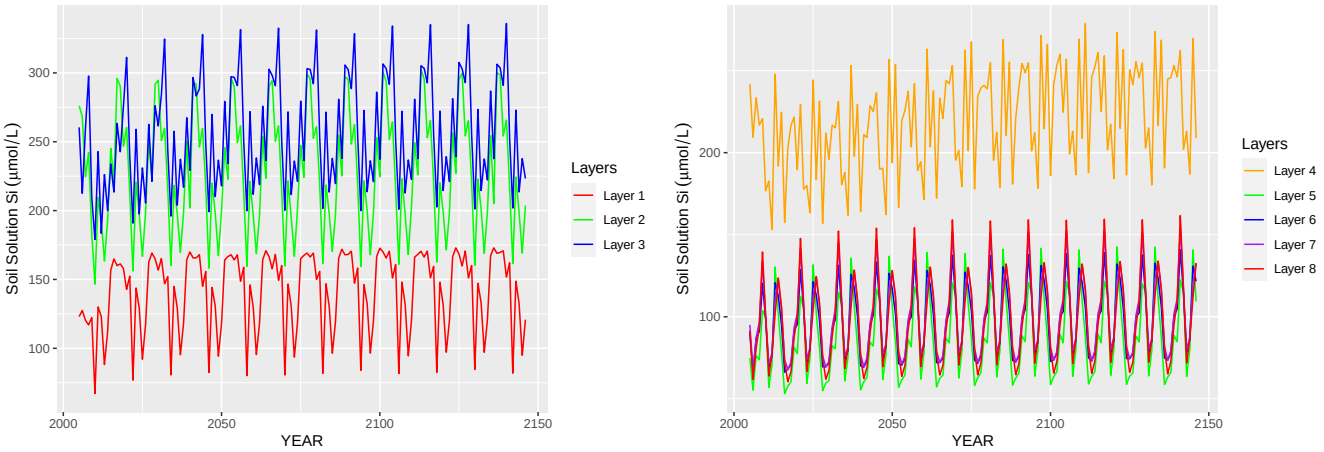


Figure 6: Monthly SiO2 Concentrations by Soil Layer

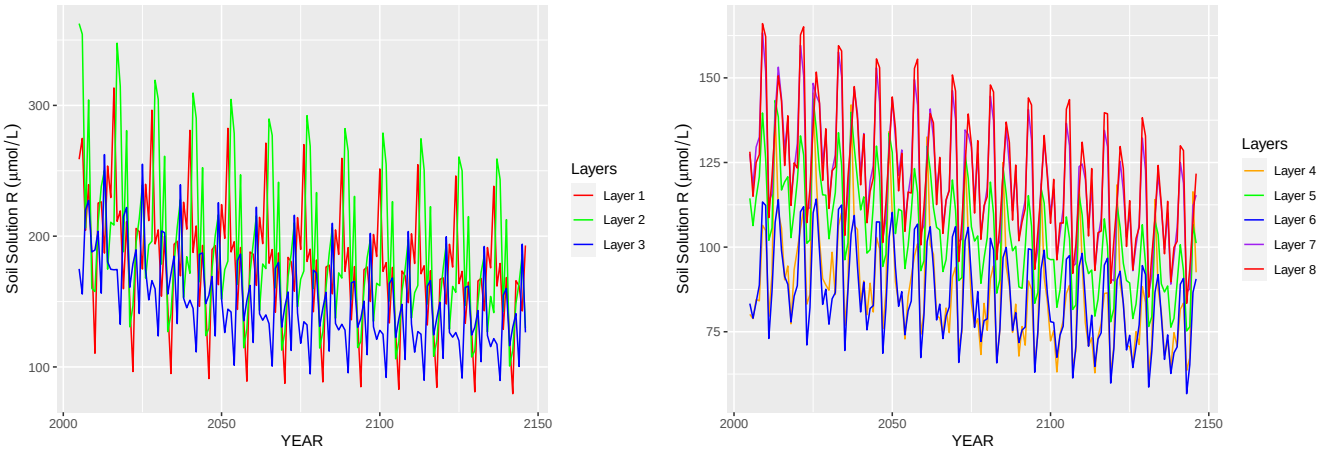


Figure 7: Monthly Organic Acid Base (R-) Concentrations by Soil Layer

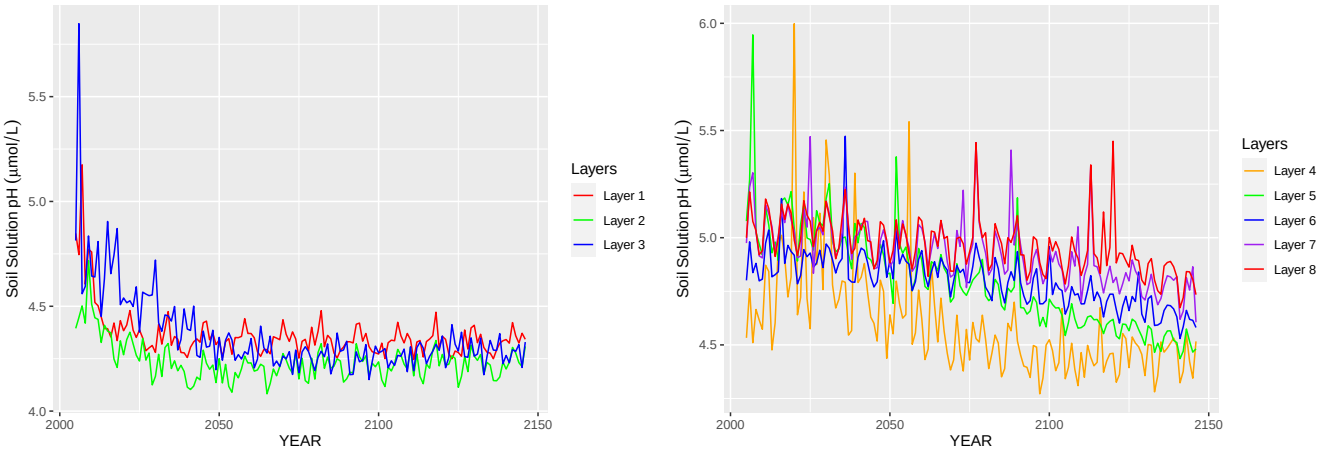


Figure 8: Monthly pH by Soil Layer

Weathering Results

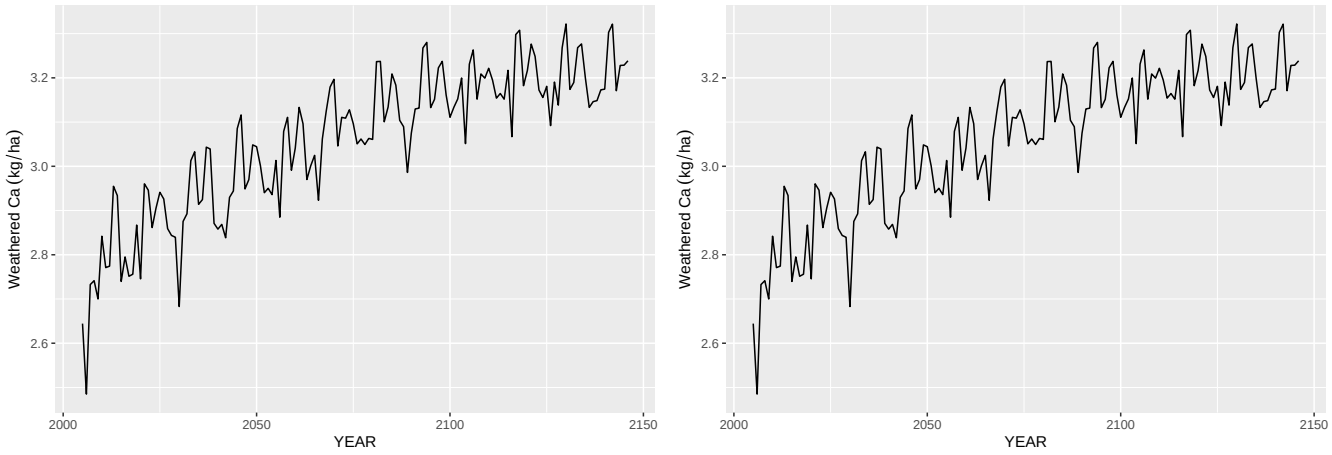


Figure 9: Figure 9: Calcium Weathering by Layer

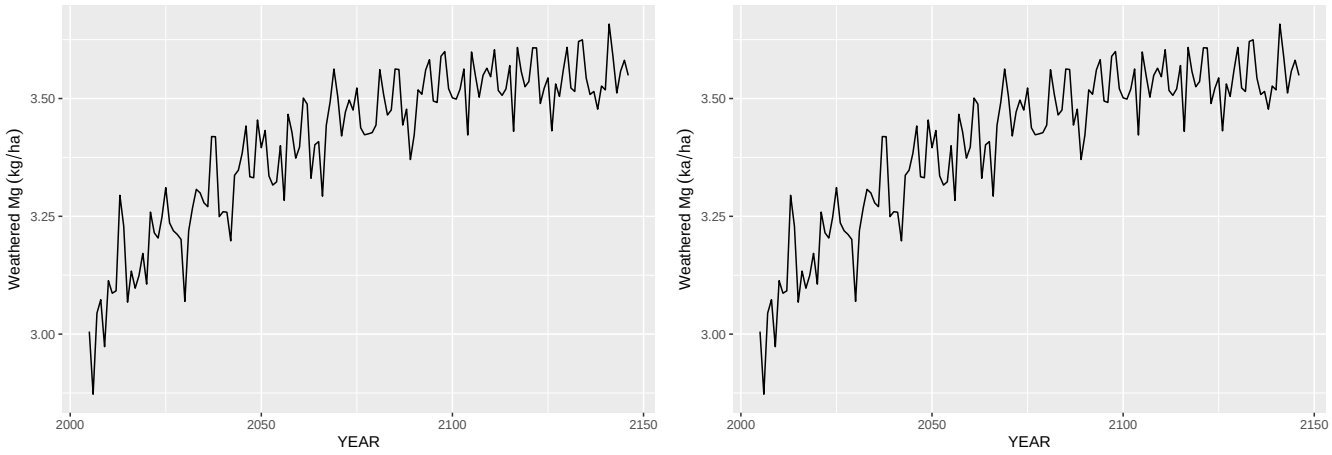


Figure 10: Figure 10: Magnesium Weathering by Layer

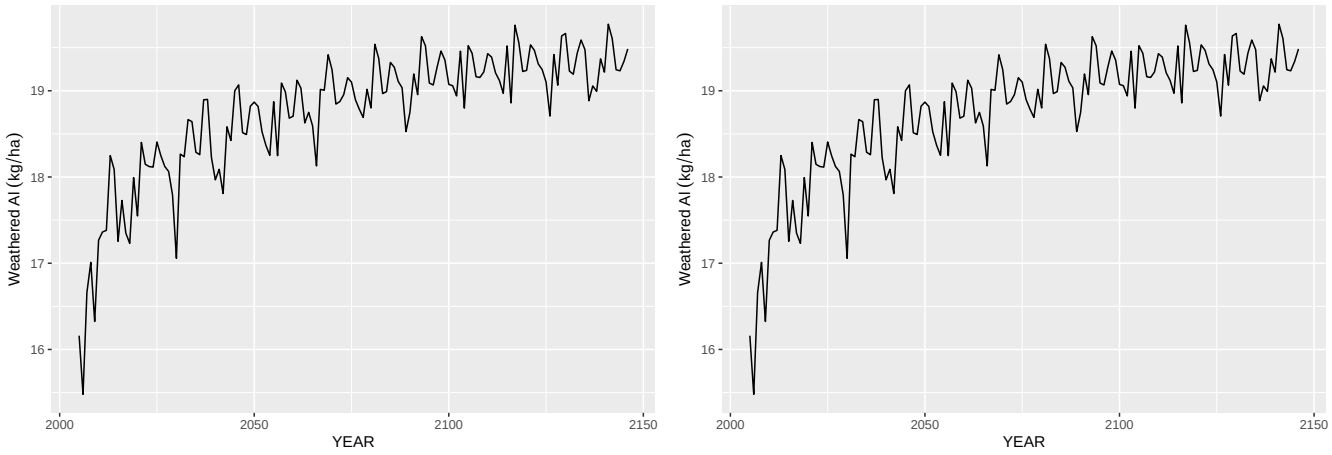


Figure 11: Figure 12: Aluminum Weathering by Layer

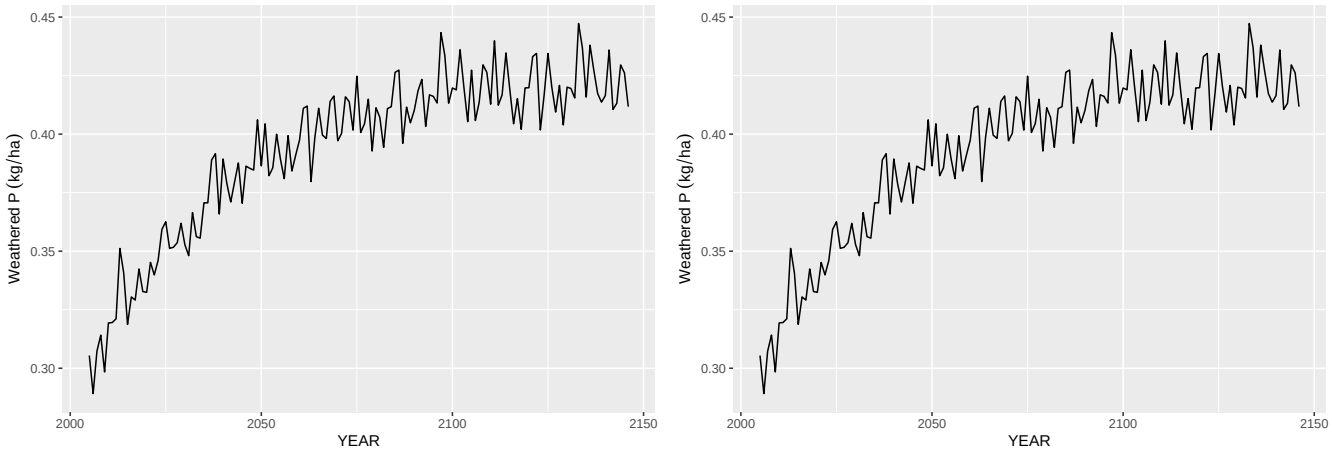


Figure 12: Figure 13: Phosphate Weathering by Layer

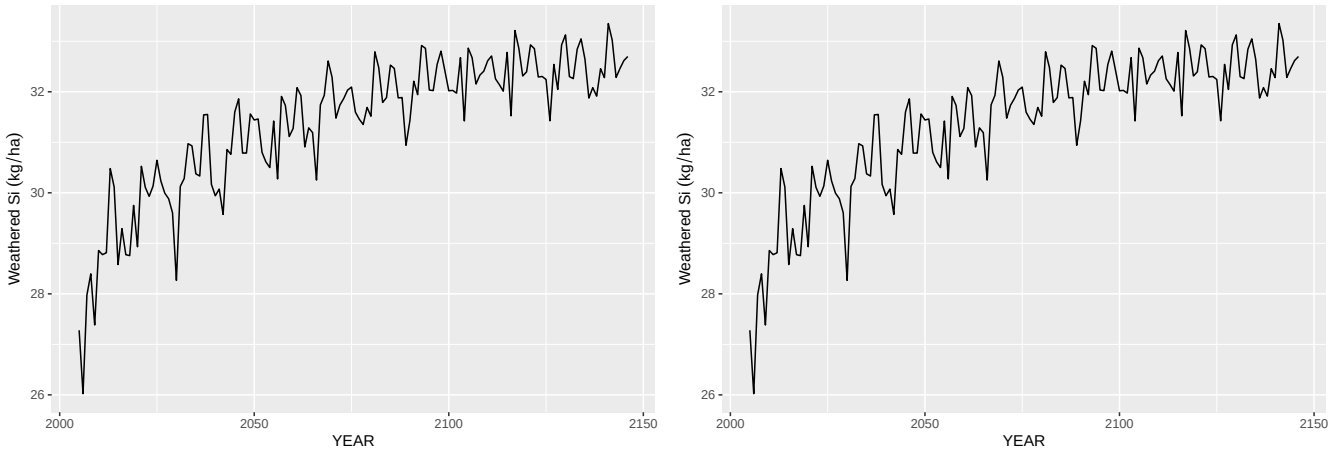


Figure 13: Figure 14: Silica Weathering by Layer

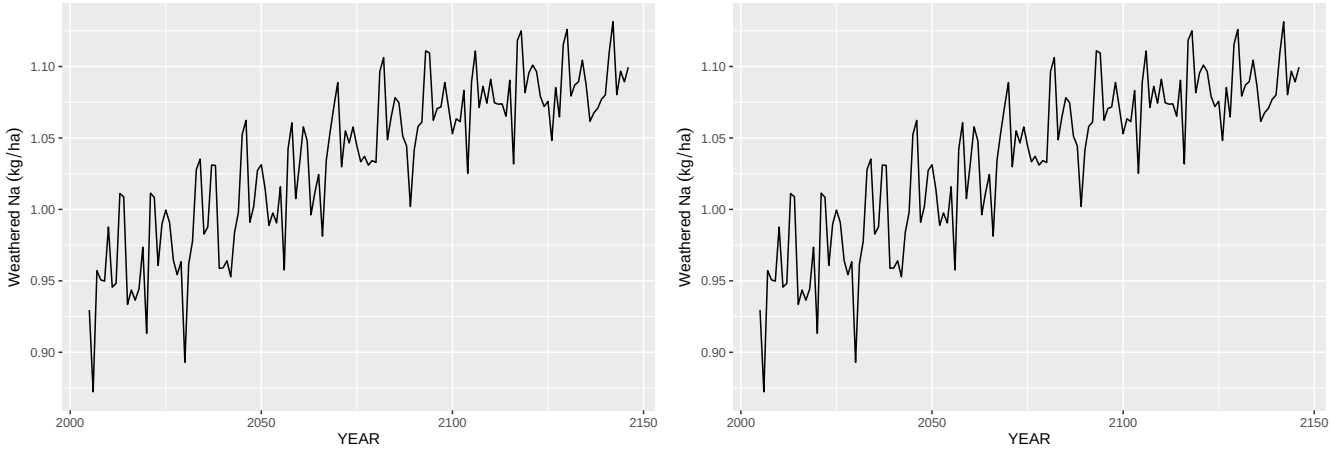


Figure 14: Figure 15: Sodium Weathering by Layer

Litter Pool Results

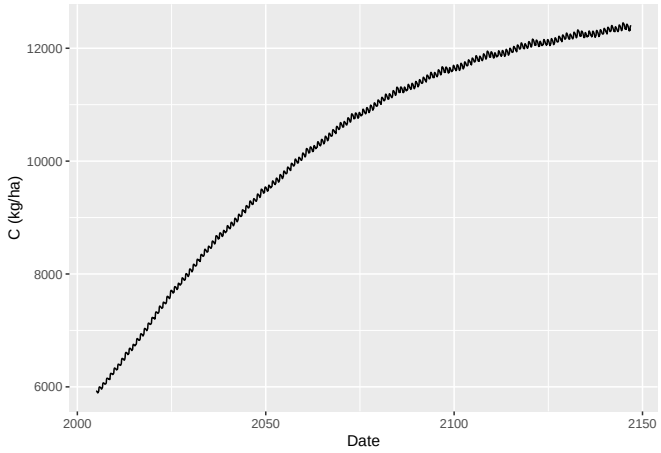
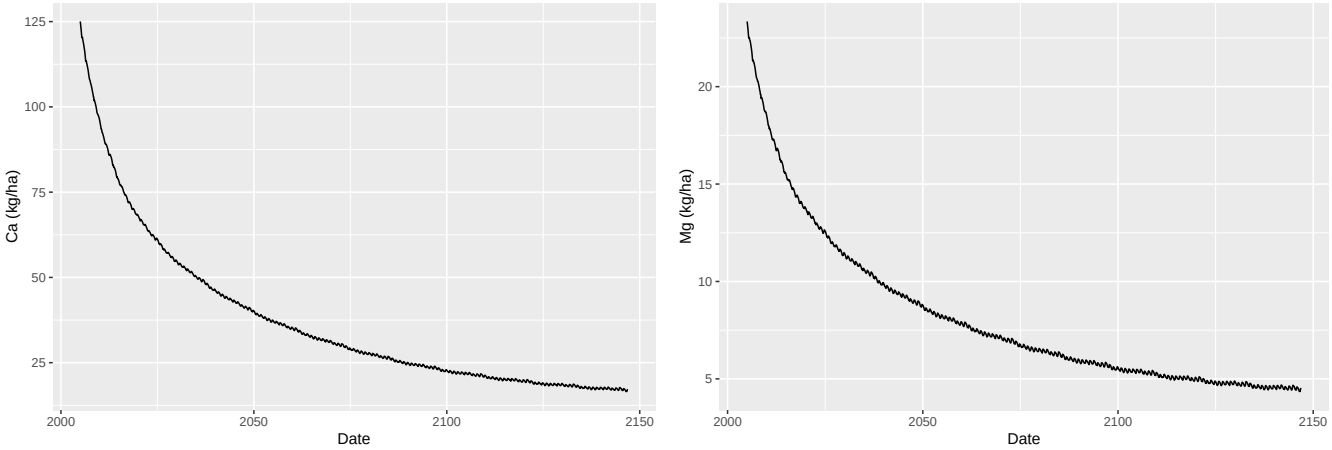


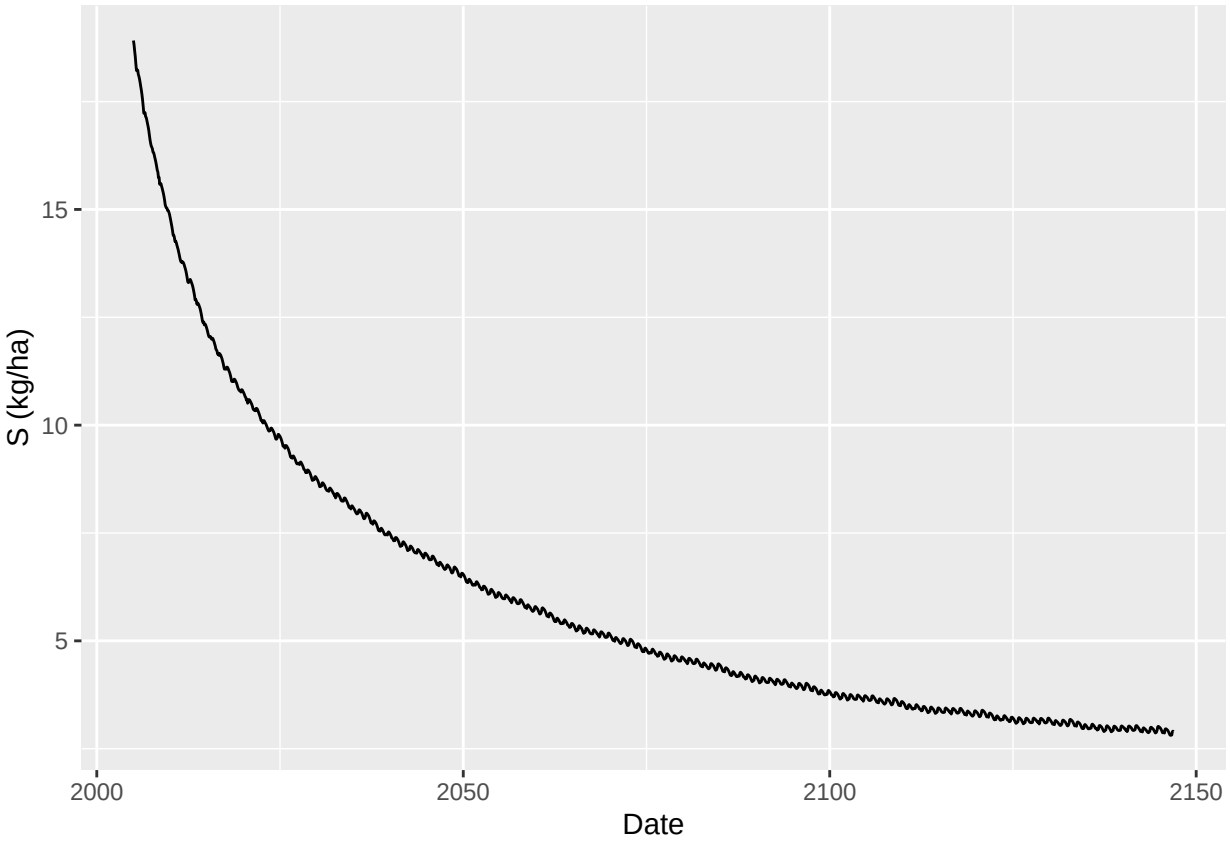
Figure 15: Litter Pool Carbon Content Over Simulation Period

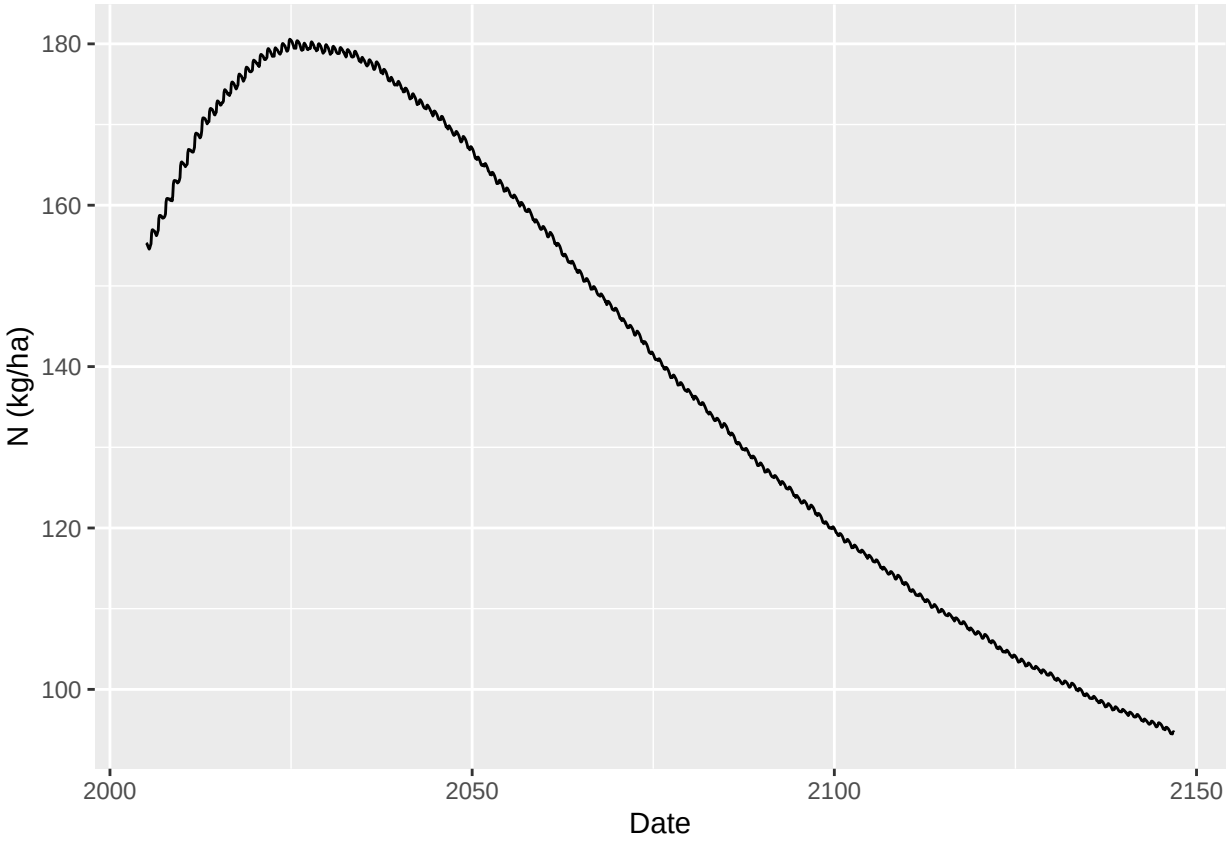


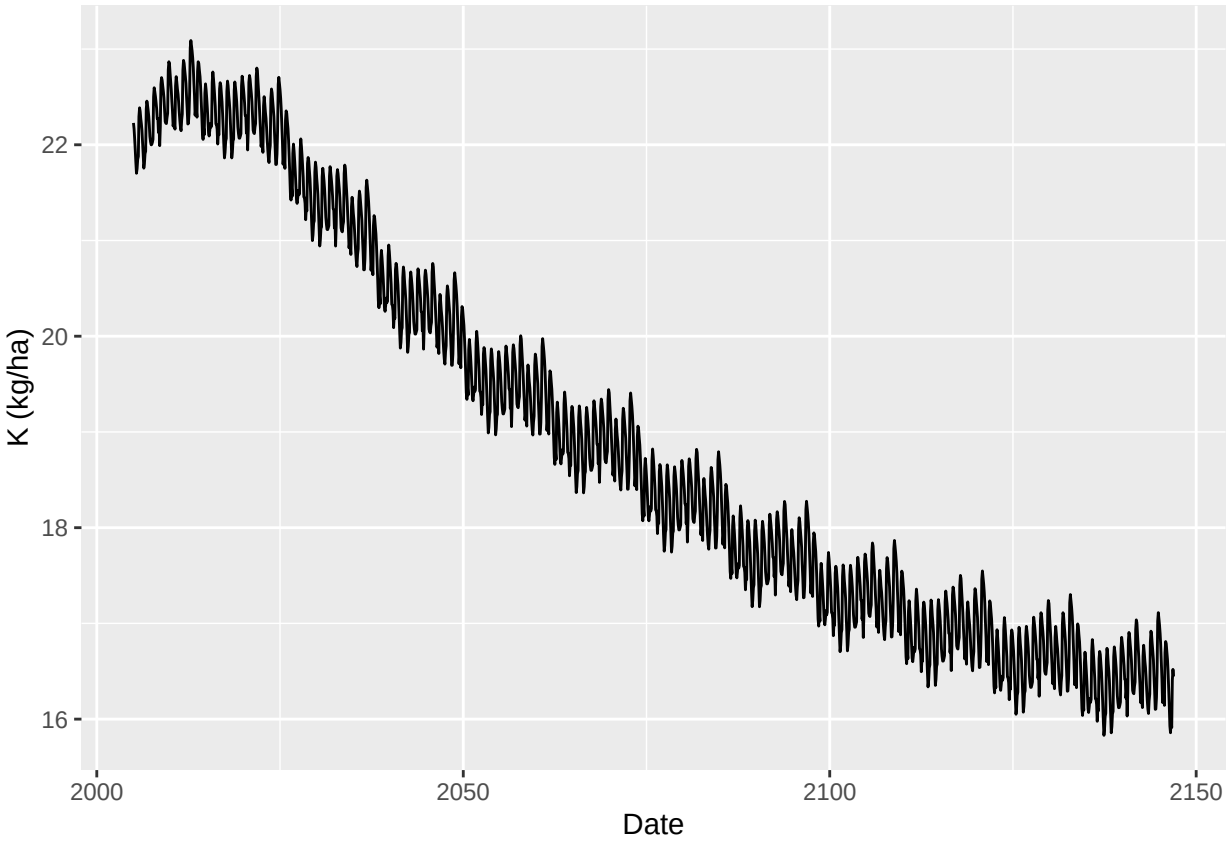
(a) Litter Calcium Content

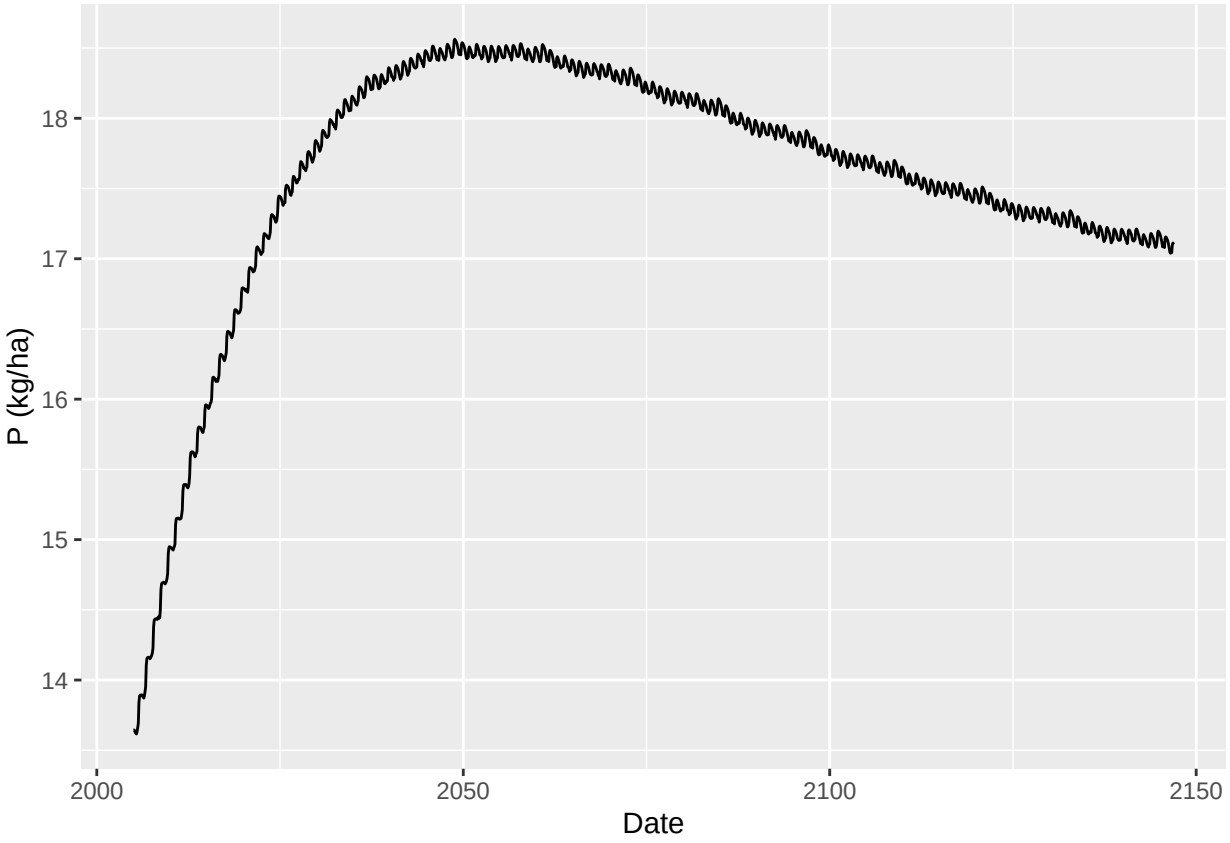
(b) Litter Magnesium Content

Figure 16: Litter Pool Nutrient Content Over Simulation Period

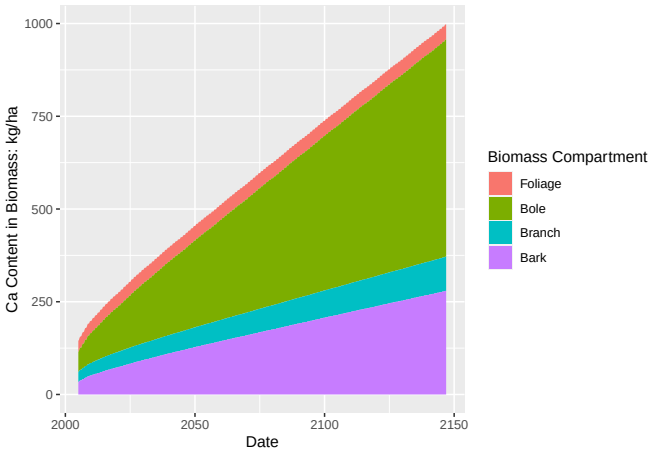

S (kg/ha)
15
10
5
2000
2050
2100
2150
Date


N (kg/ha)
180
160
140
120
100
2000
2050
2100
2150
Date

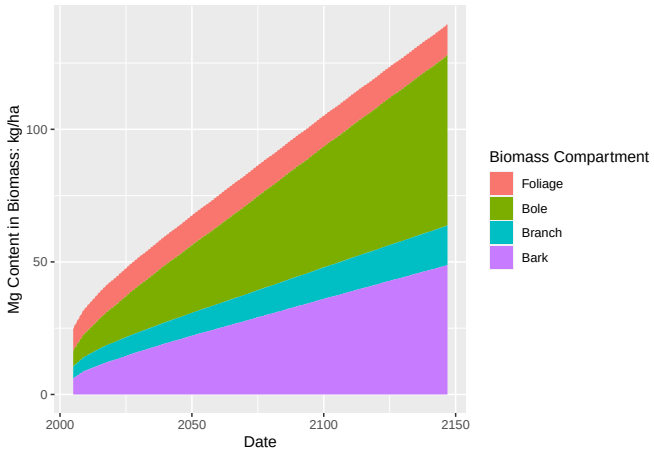

K (kg/ha)
22
20
18
16
2000
2050
2100
2150
Date


P (kg/ha)
18
17
16
15
14
2000
2050
2100
2150
Date

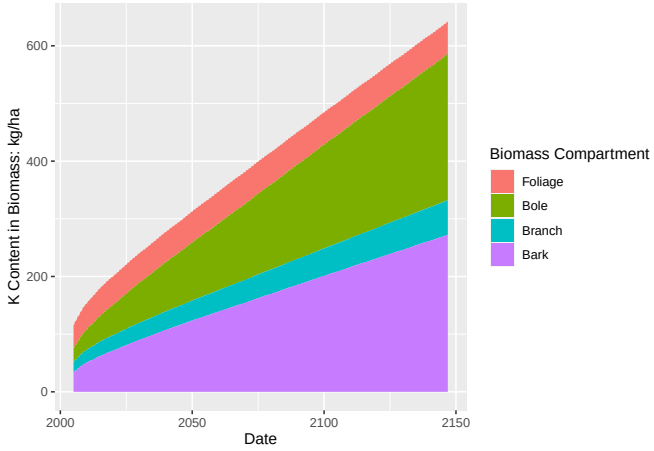
Tree Nutrient Content



(a) Calcium content in each biomass compartment

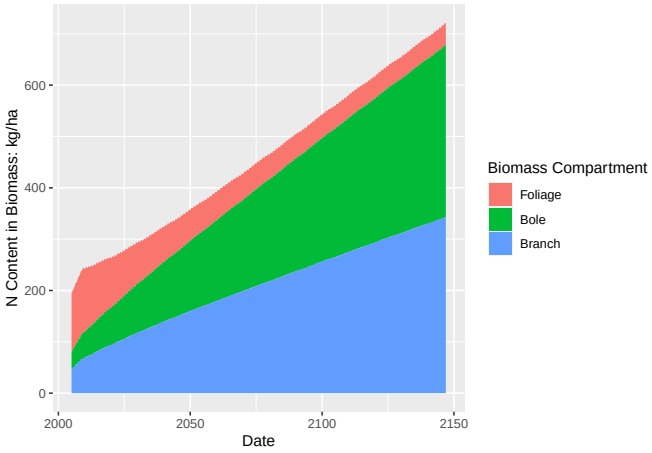


(b) Magnesium content in each biomass compartment

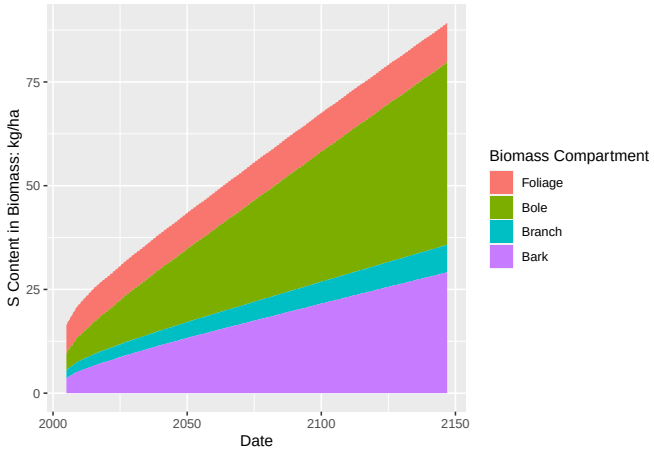


(c) Potassium content in each biomass compartment

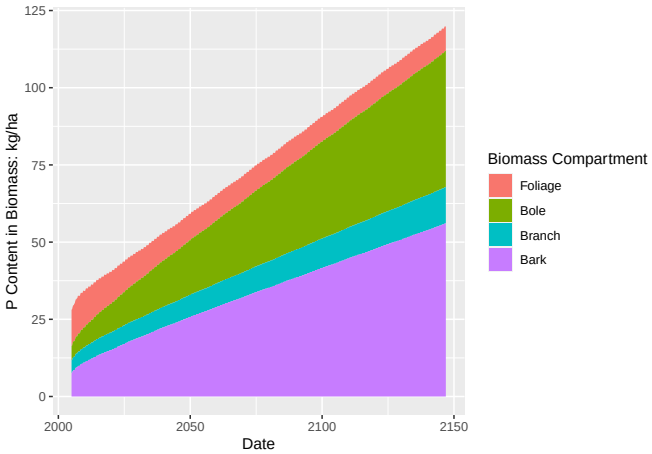
Figure 17: Base Cation Nutrient Content in Simulated Forest



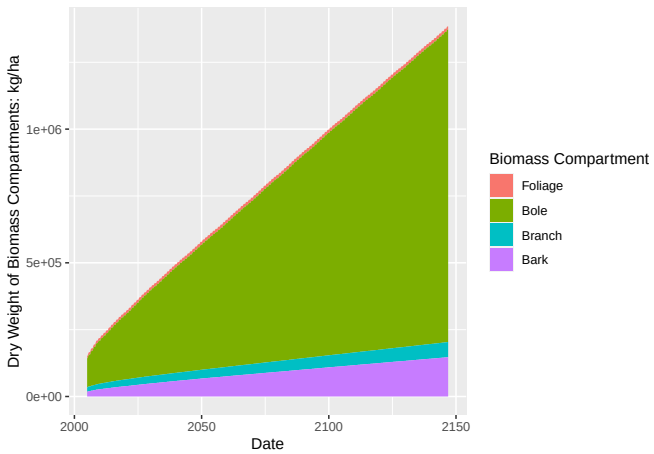
(a) Nitrogen content in each biomass compartment



(b) Sulfur content in each biomass compartment



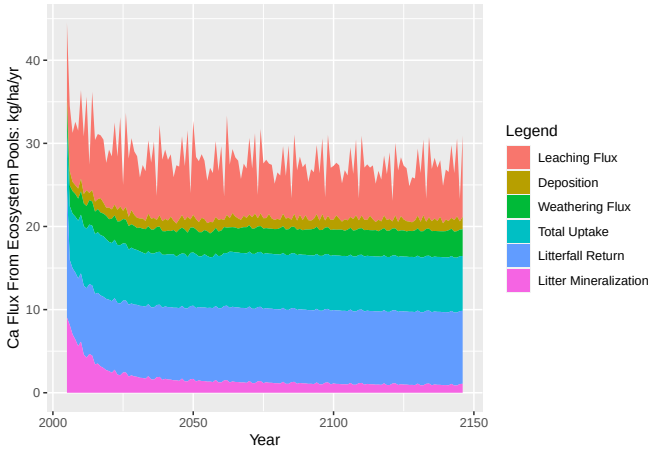
(c) Phosphorous content in each biomass compartment

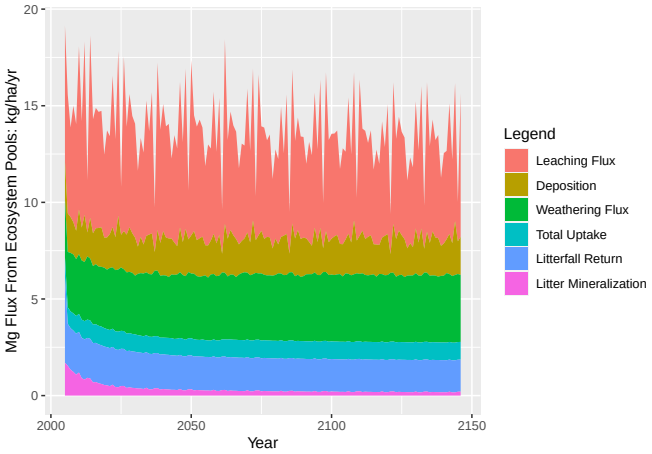


(d) Biomass of each compartment

Figure 18: N, S, and P Nutrient Contents and biomass per compartment

Analysis 1: Stack Flux Data



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## No id variables; using all as measure variables
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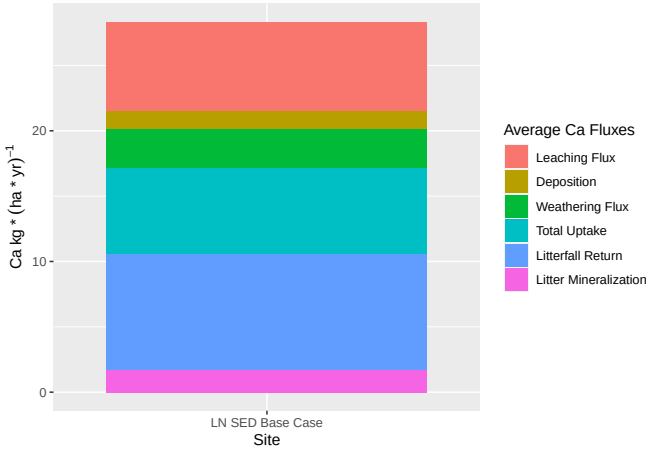
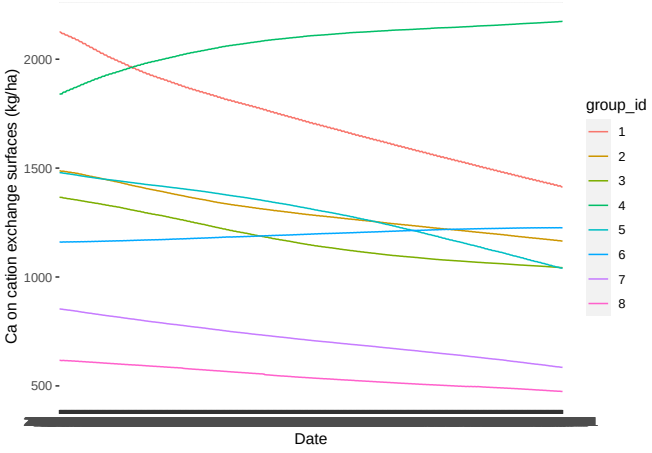


Cation Exchange Capacity



Anion Exchange Capacity