SUPPLEMENTARY DATA
Ruiz, I., Martin, D., Aizpurua, A., & Schwendenmann, L. (2026). Soil-driven variability in grapevine water uptake depth across seven soil types in Marlborough, New Zealand. *OENO One, 60*(4).
https://doi.org/10.20870/oeno-one.2026.60.4.10024

SUPPLEMENTARY DATA

SI–1. Study site descriptions and images.

Selwyn

Location: Rowley Vineyard

Cabernet-Sauvignon grafted onto Schwarzmann, planted in 2002



Awatere

Location: Rowley Vineyard

Cabernet-Sauvignon grafted onto Schwarzmann, planted in 2005



Hinds

Location: Starborough Vineyard

Pinot gris grafted onto 101-14, planted in 2005



Temuka

Location: Starborough Vineyard

Pinot gris grafted onto 101-14, planted in 2005



SUPPLEMENTARY DATA
Ruiz, I., Martin, D., Aizpurua, A., & Schwendenmann, L. (2026). Soil-driven variability in grapevine water uptake depth across seven soil types in Marlborough, New Zealand. *OENO One, 60*(4).
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Renwick

Location: Bankhouse Vineyard

Cabernet-Sauvignon grafted onto 3309C, planted in 2006



Seaview

Location: VM Higgins Road

Cabernet-Sauvignon grafted onto 3309C, planted in 2008



Pukeuri

Location: Templar

Cabernet-Sauvignon grafted onto SO4, planted in 2006



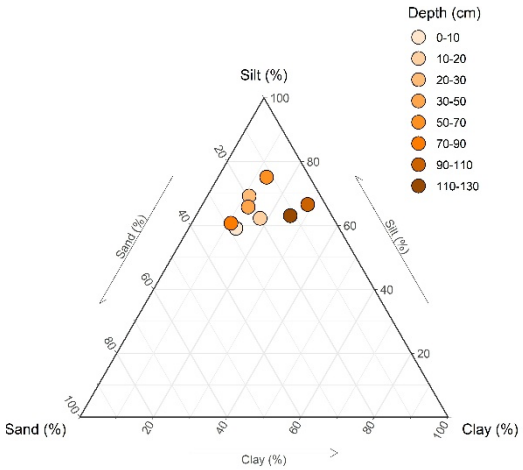
SUPPLEMENTARY DATA
Ruiz, I., Martin, D., Aizpurua, A., & Schwendenmann, L. (2026). Soil-driven variability in grapevine water uptake depth across seven soil types in Marlborough, New Zealand. *OENO One, 60*(4).
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SI–2. Isotopic composition of water samples. **(a)** Raw values. **(b)** Statistical differences (p-values) between soil depth groups. **(c)** Soil texture ternary diagrams.

(a) (b) (c)

Selwyn

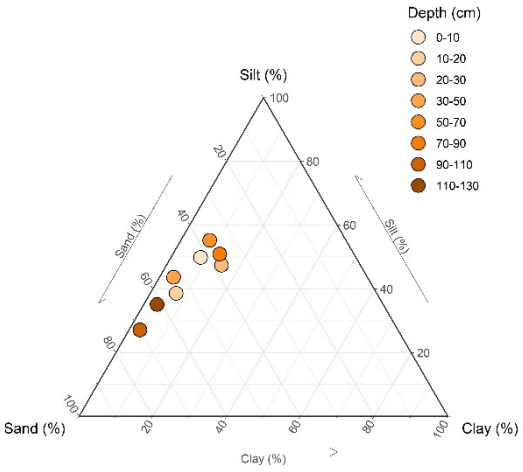
sample	$\delta^{18}O$	$\delta^{2}H$	
xylem	-7.426445325	-52.63694200	
xylem	-7.404865725	-52.27515988	
xylem	-7.706980125	-54.62364886	
irrigation	-7.667417525	-50.70465204	
rainfall	-3.884189725	-21.98036900	
grass	-7.154198325	-54.67557333	
S_0_10	-6.152735125	-45.37189900	
S_0_10	-6.647010725	-48.73924772	Shallow
S_0_10	-6.279129925	-47.61366896	
S_10_20	-7.468576925	-54.73139948	p<0.01
S_10_20	-7.449566325	-53.39981020	
S_10_20	-7.704411125	-54.78359844	Upper-intermediate
S_20_30	-7.498377325	-54.35259596	
S_20_30	-7.713145725	-54.69477768	
S_20_30	-7.978780325	-56.21680032	p<0.01
S_30_50	-7.937162525	-56.48831744	
S_30_50	-8.037353525	-56.58033616	Lower-intermediate
S_30_50	-7.919179525	-55.8421232	
S_50_70	-7.631965325	-53.80698272	p=0.05
S_50_70	-7.971073325	-56.03853984	
S_70_90	-8.142168725	-56.96532928	
S_70_90	-7.684372925	-55.88926732	
S_70_90	-7.992652925	-56.35596316	Deep
S_90_110	-7.598054525	-55.11701156	
S_90_110	-7.640186125	-55.74618440	
S_90_110	-8.050198525	-55.91526364	
S_110_130	-7.864202925	-56.19792204	
S_110_130	-7.889892925	-56.69917648	
S_110_130	-7.703897325	-54.51981832	



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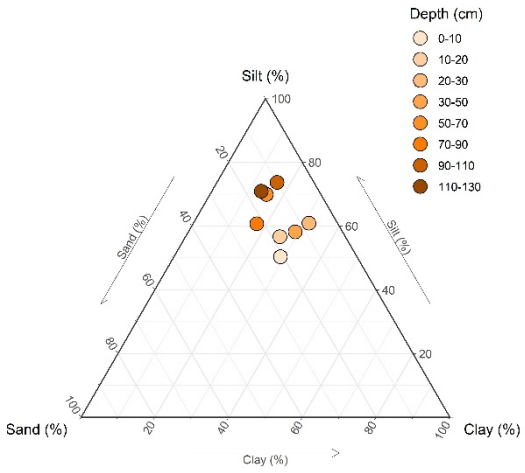
Awatere

sample	$\delta^{18}O$	$\delta^{2}H$	
xylem	-7.740377125	-53.28519944	
xylem	-7.563116125	-54.43367972	
xylem	-7.655942658	-54.58099220	
irrigation	-7.867417525	-51.20465204	
rainfall	-3.934189725	-21.96036900	
grass	-7.743973725	-47.32780452	
S_0_10	-5.763274725	-45.10110400	
S_0_10	-6.846878925	-49.44279892	
S_0_10	-6.222611925	-47.04546368	
S_10_20	-7.002560325	-50.45748068	Shallow
S_20_30	-7.523039725	-53.35276924	
S_10_20	-7.720852725	-54.56820036	
S_20_30	-7.959769725	-56.27446676	p=0.01
S_20_30	-8.443255525	-58.24992918	Upper-intermediate
S_30_50	-8.499944792	-59.36988572	
S_30_50	-8.436062325	-58.27164436	p=0.03
S_30_50	-8.095412925	-55.78198092	
S_50_70	-8.323540125	-57.42098700	
S_50_70	-8.029646525	-55.08276244	Lower-intermediate
S_50_70	-8.125213325	-56.90518700	
S_70_90	-8.069722925	-56.83895828	
S_70_90	-7.589833725	-53.48254452	
S_70_90	-7.955659325	-54.75822108	p<0.01
S_90_110	-7.802546925	-54.97929296	
S_90_110	-7.589833725	-53.3404932	
S_90_110	-7.852899325	-54.35569076	
S_110_130	-7.447511125	-54.84188384	Deep
S_110_130	-7.788674325	-54.61689188	
S_110_130	-7.623744525	-54.46689724	



Temuka

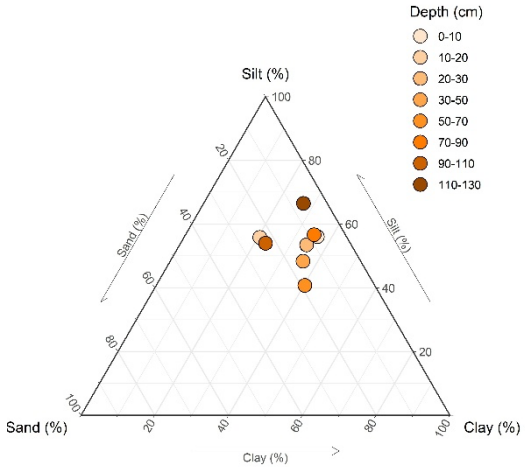
sample	$\delta^{18}O$	$\delta^{2}H$	
xylem	-6.556581925	-48.84230456	
xylem	-7.047260925	-50.59994464	
xylem	-6.330509925	-48.14453032	
irrigation	-7.838512925	-50.69258232	
grass	-6.01587699	-45.0456233	
root_90_110	-8.142682525	-53.12499196	
S_0_10	-2.975909725	-34.46241952	
S_0_10	-2.367450398	-31.08316456	Shallow
S_0_10	-2.034537148	-26.73841502	
S_10_20	-6.473860125	-49.12723248	p<0.01
S_10_20	-6.548799398	-51.08083791	
S_10_20	-5.489482898	-44.10965591	
S_20_30	-7.244560125	-52.71493096	Upper-intermediate
S_20_30	-7.262776648	-53.72812876	
S_20_30	-6.436447648	-48.90208496	
S_30_50	-7.309298925	-52.25359944	p=0.18
S_30_50	-7.226534148	-53.03101056	
S_30_50	-6.517734398	-49.48905021	
S_50_70	-7.318547325	-52.92702792	
S_50_70	-7.416548398	-53.65624491	Lower-intermediate
S_50_70	-6.687038648	-49.20565201	
S_70_90	-7.168517725	-52.26917660	
S_70_90	-6.719139148	-49.59403166	
S_90_110	-6.719656898	-50.22030031	
S_90_110	-7.621059648	-55.36904571	
S_90_110	-7.489551148	-53.52385451	p<0.01
S_110_130	-7.111075898	-51.16771911	
S_110_130	-7.397909398	-52.29924331	
S_110_130	-7.631414648	-54.06686201	Deep
S_70_90	-7.572391148	-54.55143156	



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Hinds

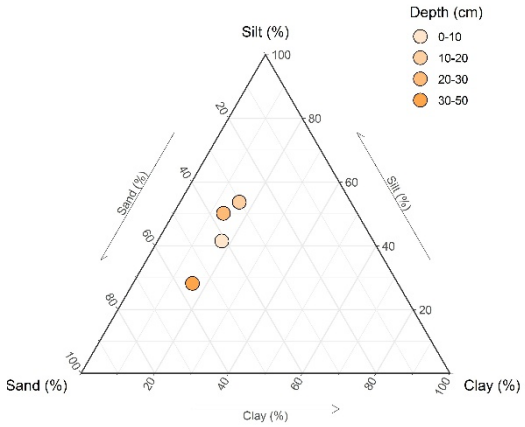
sample	$\delta^{18}O$	$\delta^{2}H$	
xylem	-8.055336525	-56.92922328	
xylem	-6.955804525	-50.23135396	
xylem	-6.688114725	-50.78356944	
irrigation	-7.538512925	-50.99258232	
grass	-6.515983530	-50.35987740	
root_10_20	-8.075888525	-54.68559644	
root_30_50	-7.542050325	-52.1520900	
S_0_10	-4.897694648	-42.02036991	
S_0_10	-4.877502398	-41.54872911	Shallow
S_0_10	-4.600506148	-42.03433296	
S_10_20	-7.406193398	-54.20235531	p<0.01
S_10_20	-6.753310648	-48.01084860	
S_10_20	-6.533784648	-48.57886621	
S_20_30	-6.573651398	-48.91966806	
S_20_30	-6.566920648	-48.96155721	Upper-intermediate
S_20_30	-7.881487898	-55.68605866	
S_30_50	-7.606562648	-54.54212286	p=0.05
S_30_50	-7.000277398	-50.09877006	
S_30_50	-6.669435148	-48.77538321	Lower-intermediate
S_50_70	-7.333535815	-52.93430351	
S_50_70	-7.321800148	-52.63177076	
S_50_70	-6.906219481	-50.69711261	
S_70_90	-7.933262898	-55.60641756	p<0.01
S_70_90	-7.004937148	-50.46904946	
S_70_90	-7.636074398	-54.44851871	
S_90_110	-7.973129648	-55.82827491	
S_90_110	-7.539255148	-54.08651371	Deep
S_90_110	-8.606337898	-59.31386591	
S_110_130	-8.113439898	-57.11959846	
S_110_130	-7.805378648	-55.48437016	
S_110_130	-8.101013898	-56.16907676	



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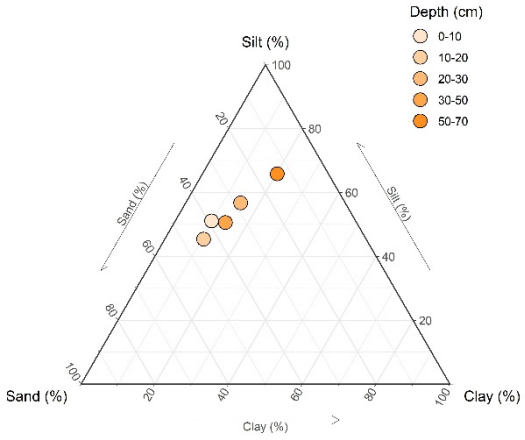
Renwick

sample	$\delta^{18}O$	$\delta^{2}H$	
xylem	-6.304648658	-46.02098172	
xylem	-4.970481325	-39.31795404	
xylem	-5.876824525	-46.88556568	
irrigation	-6.605906725	-43.62209908	
grass	-2.235899410	-29.0269841	
root_20_30	-5.934370125	-40.61085868	
S_0_10	-1.398222398	-28.07335156	
S_0_10	-3.222773398	-37.75698531	Shallow
S_0_10	-0.367899898	-24.67360746	
S_10_20	-4.384086648	-42.13104001	p=0.07
S_10_20	-5.057851981	-46.42803936	
S_10_20	-3.491485648	-36.12020556	Upper-intermediate
S_20_30	-6.066256398	-51.84932281	
S_20_30	-5.161747148	-43.74506516	
S_20_30	-5.361598648	-45.04931746	p=0.1
S_30_50	-5.811523398	-47.20014431	
S_30_50	-5.328462648	-45.23135426	Lower-intermediate

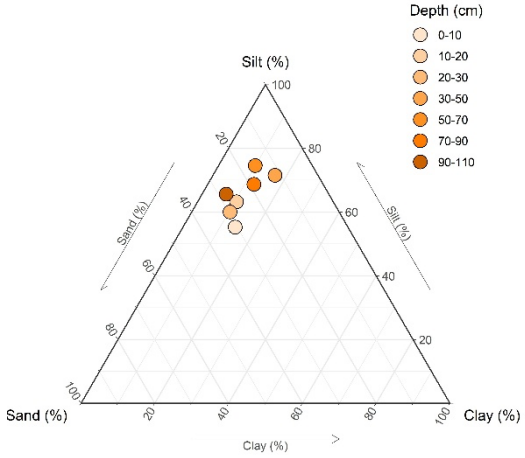


Seaview

sample	$\delta^{18}O$	$\delta^{2}H$	
xylem	-6.102553992	-51.25501064	
xylem	-6.228263725	-50.81327952	
xylem	-6.433783725	-52.43939060	
irrigation	-5.668735525	-42.72285336	
grass	-3.154198325	-35.60075573	
S_0_10	1.267672352	-23.07457966	
S_0_10	0.502437852	-23.15577221	Shallow
S_0_10	0.281358602	-25.99182281	
S_10_20	-4.843848648	-45.44855726	p<0.01
S_10_20	-5.106347898	-46.40425046	
S_10_20	-5.003833398	-46.55629256	Upper-intermediate
S_20_30	-6.435757315	-53.08039838	
S_20_30	-6.693769398	-51.99929631	
S_20_30	-6.638887898	-52.84431941	p<0.01
S_30_50	-7.012703398	-58.09597766	
S_30_50	-7.274167148	-57.48522351	

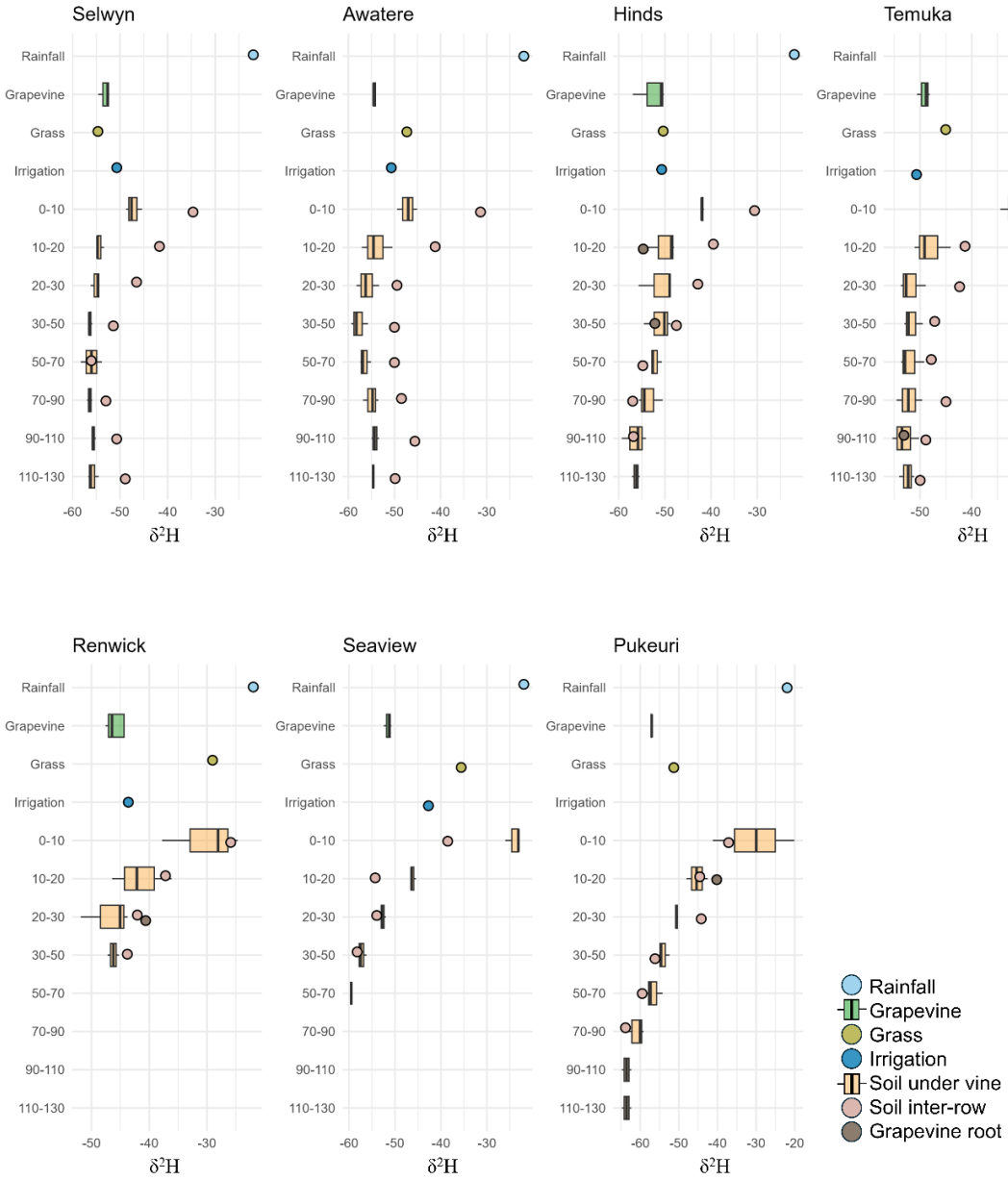


S_30_50	-7.053605648	-56.18200551	Lower-intermediate	
S_50_70	-7.572391148	-59.49797131		
Pukeuri				
sample	$\delta^{18}O$	$\delta^{2}H$		
xylem	-7.485018525	-57.02180938		
xylem	-7.281553725	-57.24417076		
xylem	-6.865889525	-57.03816024		
grass	-6.542195525	-51.31319288		
root_10_20	-5.883503925	-40.19594916		
S_0_10	-2.061460148	-29.96250051		
S_0_10	-1.264565852	-20.09561400	Shallow	
S_0_10	-5.175208648	-41.19137846	p=0.01	
S_10_20	-6.747615398	-48.03379011		
S_10_20	-5.360563148	-45.40770241		
S_10_20	-4.974321648	-42.51529260		
S_20_30	-7.009079148	-50.65832636		
S_20_30	-6.289061481	-50.91172986		
S_20_30	-6.508932648	-50.18039400		
S_30_50	-7.168028398	-52.40370761	Upper-intermediate	
S_30_50	-6.767289898	-54.64141566		
S_30_50	-7.071726898	-55.13682240		
S_50_70	-7.421725898	-54.20959541		
S_50_70	-7.303161148	-58.27904876		
S_50_70	-7.329566398	-57.3386946		
S_70_90	-8.029564398	-59.20164436		
S_70_90	-8.657595148	-64.30407720		
S_70_90	-7.761369898	-60.05623140	p<0.01	
S_90_110	-8.485702148	-64.77333720	Lower-intermediate	
S_90_110	-7.855600398	-62.31910740		
S_110_130	-8.485702148	-64.77333720	p<0.01	
S_110_130	-7.855600398	-62.31910740		
			Deep	

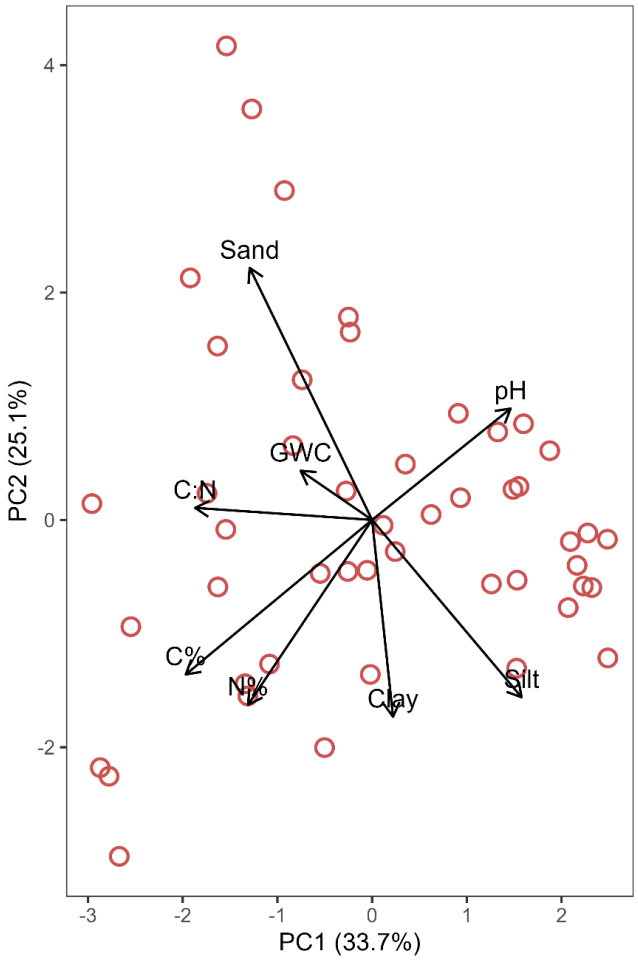


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SI–3. Interference plots of δ^2H isotopic composition.

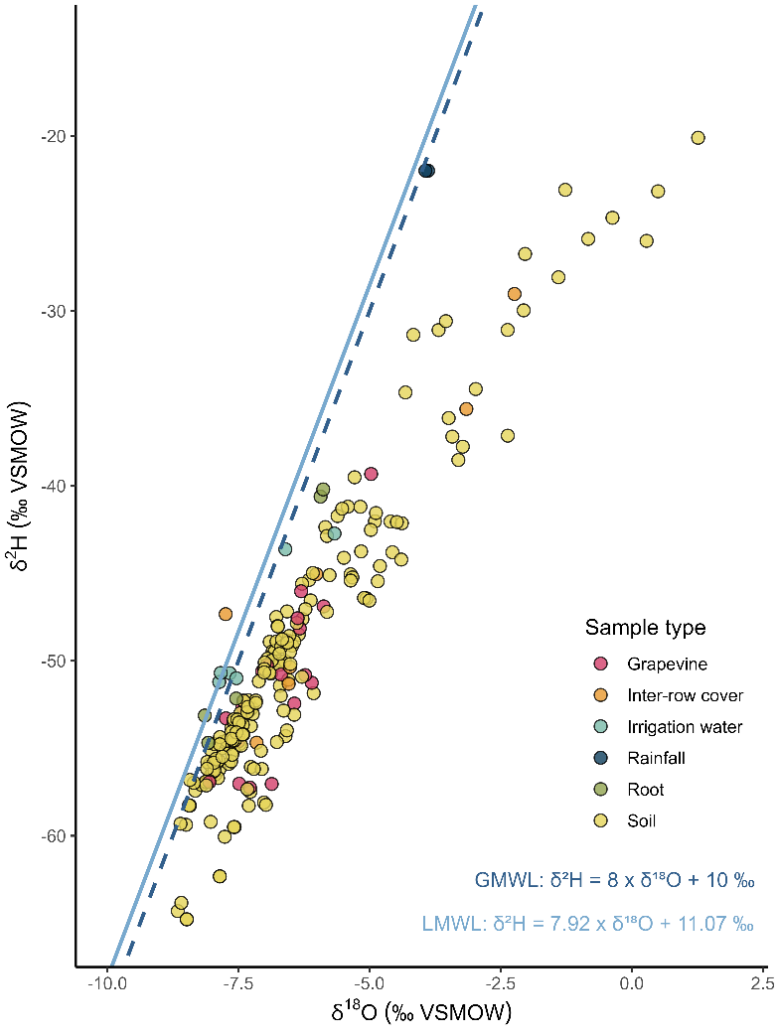


SI–4. Principal component analysis of soil physical and chemical properties.



	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8
Clay	0.05531112	-0.43300923	-0.42374840	0.50707482	0.37540504	-0.16476955	-0.05926901	4.48514e-01
Silt	0.39461417	-0.39005546	0.03180785	-0.46230127	-0.35830949	0.26461395	0.02338763	5.27682e-01
Sand	-0.32317219	0.55435914	0.24031969	0.02271792	0.02883583	-0.09138280	0.02020473	7.21377e-01
GWC	-0.18877744	0.10803234	-0.62751447	-0.27249471	-0.43352154	-0.54261311	-0.04789999	-2.56205e-05
N%	-0.32714939	-0.40633492	0.41867648	-0.22219042	0.09743867	-0.36450782	-0.60070490	-2.91091e-05
C%	-0.49196159	-0.33997979	0.04777133	-0.29691141	0.22692114	-0.04628784	0.70591297	-4.00252e-04
C:N	-0.46724845	0.02642188	-0.40546256	-0.18420402	0.12398085	0.66189967	-0.35939850	2.06770e-04
pH	0.36574459	0.24491278	-0.16101430	-0.53190892	0.68231531	-0.16410653	-0.07007693	-6.67420e-05

SI–5. Dual isotope ($\delta^{18}O$–$\delta^{2}H$) plot of all extracted water samples relative to the Global Meteoric Water Line (GMWL; Craig, 1961) and the Local Meteoric Water Line (LMWL; Baisden *et al.,* 2016).



The line-conditioned excess (LC-excess, Landwehr & Coplen, 2006), was –9.09 ± 6.82 ‰. The soil water line (SL-excess, Barbeta *et al.,* 2019) was 0.4 ± 3.1‰, reflecting local meteoric conditions.

Baisden, W. T., Keller, E. D., Van Hale, R., Frew, R. D., & Wassenaar, L. I. (2016). Precipitation isoscapes for New Zealand: enhanced temporal detail using precipitation-weighted daily climatology†. *Isotopes in Environmental and Health Studies*, *52*(4–5), 343–352. https://doi.org/10.1080/10256016.2016.1153472

Barbeta, A., Jones, S. P., Clavé, L., Wingate, L., Gimeno, T. E., Fréjaville, B., Wohl, S., & Ogee, J. (2019). Unexplained hydrogen isotope offsets complicate the identification and quantification of tree water sources in a riparian forest. *Hydrology and Earth System Sciences*, *23*(4), 2129–2146. https://doi.org/10.5194/HESS-23-2129-2019

Craig, H. (1961). Isotopic Variations in Meteoric Waters. *Science*, *133*(3465), 1702–1703. https://doi.org/10.1126/SCIENCE.133.3465.1702

Landwehr, J. M., & Coplen, T. B. (2006). *Line-conditioned excess: A new method for characterizing stable hydrogen and oxygen isotope ratios in hydrologic systems* (V. pp. 132–135. International Conference On Isotopes In Environmental Studies. IAEA, Ed.). https://inis.iaea.org/records/x5q5b-7y486

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SI–6. MixSIAR estimated mean source proportions and [95 % credible intervals] for each soil type across soil depth intervals (Table 1) followed by sample size, convergence diagnostics, deviance information criterion (DIC), and posterior summary statistics for the MixSIAR models.

Table 1. MixSIAR estimated mean source proportions and [95 % credible intervals].

	Selwyn	Awatere	Hinds	Temuka	Renwick	Seaview	Pukeuri
Shallow	0.22 [0.08-0.39]	0.13 [0.07-0.29]	0.12 [0.08-0.32]	0.12 [0.05-0.22]	0.06 [0.06-0.22]	0.1 [0.04-0.18]	0.04 [0.03-0.11]
Upper-intermediate	0.28 [0.2-0.73]	0.26 [0.18-0.68]	0.21 [0.16-0.61]	0.18 [0.14-0.51]	0.24 [0.19-0.74]	0.22 [0.16-0.62]	0.15 [0.11-0.4]
Lower-intermediate	0-.27 [0.77-0.63]	0.18 [0.13-0.48]	0.31 [0.21-0.75]	0.33 [0.21-0.76]	0.70 [0.2-0.96]	0.67 [0.14-0.86]	0.5 [0.23-0.88]
Deep	0.23 [0.17-0.60]	0.43 [0.22-0.83]	0.37 [0.19-0.72]	0.37 [0.19-0.74]			0.31 [0.18-0.69]

Selwyn

Sample size		n
Consumer	Grapevine	3
Source	shallow	3
	middle	5
	deep	4
	deeper	11

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
Generally the Gelman diagnostic should be < 1.05
Out of 10 variables: 0 > 1.01
                     0 > 1.05
                     0 > 1.1
The worst variables are:
                Point est.  Upper C.I.
deviance         1.0048335  1.0066074
loglik[2]        1.0021468  1.0062678
p.global[4]      1.0019521  1.0034574
loglik[3]        1.0013559  1.0041496
loglik[1]        1.0013332  1.0043955
p.global[3]      1.0004427  1.0026266
p.global[1]      1.0004014  1.0021589
resid.prop[2]    1.0001690  1.0015952
p.global[2]      0.9997384  1.0002883
resid.prop[1]    0.9995646  0.9996885
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 10):
      Chain 1 Chain 2 Chain 3
Geweke       0       0       1
################################################################################
# Summary Statistics
################################################################################
DIC = 9.655145
                    Mean        SD     2.5%      5%      25%      50%      75%      95%    97.5%
Epsilon.1          8.834     5.279    1.194   1.592    4.377    7.997   12.897   18.400   19.255
Epsilon.2         10.582     5.308    1.535   2.331    6.040   10.478   15.015   19.027   19.499
p.global.deep      0.271     0.176    0.014   0.024    0.123    0.252    0.395    0.591    0.631
p.global.deeper    0.230     0.166    0.010   0.020    0.096    0.197    0.342    0.543    0.597
p.global.middle    0.282     0.200    0.010   0.021    0.116    0.249    0.414    0.668    0.730
p.global.shallow   0.216     0.085    0.048   0.075    0.161    0.217    0.269    0.355    0.389
NULL
```

Awatere

Sample size		n
Consumer	Grapevine	3
Source	shallow	4
	middle	3
	deep	8
	deeper	8

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
Generally the Gelman diagnostic should be < 1.05
Out of 11 variables: 0 > 1.01
                     0 > 1.05
                     0 > 1.1
The worst variables are:
                  Point est.  Upper C.I.
loglik[1]         1.0014561   1.004161
p.global[2]       1.0014272   1.006427
p.global[1]       1.0013736   1.006262
p.global[4]       1.0008697   1.004502
resid.prop[1]     1.0007269   1.001438
loglik[4]         1.0000910   1.001270
deviance          0.9998963   1.000060
p.global[3]       0.9998592   1.000191
loglik[2]         0.9998301   1.000117
loglik[3]         0.9997831   1.000424
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 11):
      Chain 1 Chain 2 Chain 3
Geweke       0       0       1
################################################################################
# Summary Statistics
################################################################################
DIC = 9.205678
                  Mean        SD     2.5%      5%      25%      50%      75%      95%    97.5%
Epsilon.1        3.684   4.113    0.225    0.323    0.912    2.052    4.845   13.245   16.228
Epsilon.2        4.204   4.234    0.311    0.432    1.247    2.560    5.742   13.747   16.664
p.global.deep            0.184    0.130    0.007    0.015    0.079    0.161    0.267    0.430    0.481
p.global.deeper          0.425    0.220    0.037    0.064    0.250    0.434    0.594    0.779    0.832
p.global.middle          0.264    0.185    0.009    0.021    0.113    0.232    0.382    0.622    0.684
p.global.shallow         0.128    0.074    0.013    0.022    0.074    0.119    0.173    0.260    0.295
NULL
```

Temuka

Sample size		n
Consumer	Grapevine	3
Source	shallow	3
	middle	5
	deep	10
	deeper	6

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
Generally the Gelman diagnostic should be < 1.05
Out of 8 variables: 0 > 1.01
                    0 > 1.05
                    0 > 1.1
The worst variables are:
                Point est.  Upper C.I.
p.global[4]     1.0004877   1.0012796
p.global[1]     1.0002848   1.0020418
loglik[3]       1.0002222   1.0015517
loglik[2]       0.9999313   1.0007360
p.global[2]     0.9998943   1.0009520
p.global[3]     0.9996881   0.9997839
loglik[1]       0.9996545   0.9998723
deviance        0.9995962   0.9997835
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 10):
      Chain 1 Chain 2 Chain 3
Geweke       2       0       1
################################################################################
# Summary Statistics
################################################################################
DIC = 6.299742
                Mean        SD      2.5%        5%       25%       50%       75%       95%     97.5%
Epsilon.1      7.934   5.249   0.954   1.303   3.426   6.826  11.911        17.897        18.906
Epsilon.2      5.777   5.033   0.417   0.599   1.755   3.968   8.655  16.401        18.127
p.global.deep          0.327   0.206   0.019   0.038   0.156   0.305   0.476   0.700   0.764
p.global.deeper        0.376   0.196   0.037   0.063   0.219   0.374   0.525   0.698   0.739
p.global.middle        0.178   0.140   0.008   0.015   0.071   0.147   0.256   0.447   0.514
p.global.shallow       0.120   0.053   0.018   0.031   0.082   0.119   0.155   0.205   0.224
NULL
```

Hinds

Sample size		n
Consumer	Grapevine	3
Source	shallow	3
	middle	6
	deep	6
	deeper	9

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
Generally the Gelman diagnostic should be < 1.05
Out of 10 variables: 0 > 1.01
                     0 > 1.05
                     0 > 1.1
The worst variables are:
                  Point est.  Upper C.I.
loglik[3]         1.0016114   1.004385
loglik[2]         1.0012859   1.004014
p.global[4]       1.0004331   1.002541
p.global[3]       1.0004096   1.001545
p.global[1]       1.0003331   1.002094
deviance          1.0001148   1.000957
p.global[2]       1.0000462   1.001461
loglik[1]         0.9998699   1.000482
resid.prop[2]     0.9998218   1.000289
resid.prop[1]     0.9997406   1.000284
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 10):
      Chain 1 Chain 2 Chain 3
Geweke       0       0       2
################################################################################
# Summary Statistics
################################################################################
DIC = 15.04109

                    Mean      SD    2.5%     5%     25%     50%     75%     95%   97.5%
Epsilon.1         10.177   5.030   2.128   2.790   5.950   9.738  14.245          18.689
19.316
Epsilon.2          9.751   5.145   1.780   2.308   5.442   9.231  13.801          18.719
19.424
p.global.deep      0.309   0.208   0.013   0.026   0.133   0.278   0.455   0.695   0.750
p.global.deeper    0.366   0.190   0.029   0.056   0.220   0.371   0.506   0.681   0.722
p.global.middle    0.208   0.164   0.006   0.013   0.078   0.171   0.306   0.529   0.615
p.global.shallow   0.117   0.085   0.005   0.010   0.047   0.100   0.168   0.278   0.317
NULL
```

Renwick

Sample size		n
Consumer	Grapevine	3
Source	shallow	3
	middle	3
	deep	5

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
##
Generally the Gelman diagnostic should be < 1.05
Out of 10 variables: 0 > 1.01
                     0 > 1.05
                     0 > 1.1
The worst variables are:
                   Point est.  Upper C.I.
loglik[2]          1.009422    1.0124371
loglik[4]          1.003926    1.0118205
loglik[1]          1.002271    1.0063241
loglik[3]          1.002242    1.0085934
deviance           1.001880    1.0071828
resid.prop[2]      1.001232    1.0050295
p.global[3]        1.000829    1.0041656
p.global[1]        1.000326    1.0020408
p.global[2]        1.000257    1.0016147
resid.prop[1]      0.999641    0.9997005
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 10):
      Chain 1 Chain 2 Chain 3
Geweke       0       0       1
################################################################################
# Summary Statistics
################################################################################
DIC = 19.11718
                    Mean      SD    2.5%     5%     25%     50%     75%     95%   97.5%
Epsilon.1         10.722   5.023   2.143  2.908   6.637  10.574  14.906  19.392  18.929
Epsilon.2          6.336   4.869   0.713  1.013   2.538   4.853   8.799  16.781  18.198
p.global.deep      0.699   0.203   0.191  0.291   0.588   0.745   0.858   0.946   0.964
p.global.middle    0.237   0.195   0.008  0.016   0.083   0.187   0.339   0.636   0.737
p.global.shallow   0.064   0.061   0.002  0.004   0.019   0.046   0.090   0.184   0.223
NULL
```

Seaview

Sample size		n
Consumer	Grapevine	3
Source	shallow	3
	middle	6
	deep	4

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
Generally the Gelman diagnostic should be < 1.05
Out of 9 variables: 0 > 1.01
                    0 > 1.05
                    0 > 1.1
The worst variables are:
                Point est.  Upper C.I.
p.global[1]     1.0026589   1.0066791
p.global[2]     1.0025557   1.0066991
p.global[3]     1.0003507   1.0023815
loglik[1]       1.0001241   1.0011864
resid.prop[1]   0.9999737   1.0007225
deviance        0.9998980   1.0001291
resid.prop[2]   0.9998019   1.0002829
loglik[3]       0.9997760   0.9998018
loglik[2]       0.9997082   0.9997975
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 9):
      Chain 1 Chain 2 Chain 3
Geweke       2       1       0
################################################################################
# Summary Statistics
################################################################################
DIC = 0.5567949
                  Mean        SD     2.5%      5%     25%     50%     75%     95%   97.5%
Epsilon.1        5.205   5.163    0.183    0.277   1.130   3.194   7.857  16.416          18.052
Epsilon.2        5.499   5.225    0.206    0.296   1.314   3.565   8.481  16.898          18.296
p.global.deep            0.672    0.136    0.343   0.408   0.597   0.695   0.774   0.845   0.863
p.global.middle          0.224    0.162    0.012   0.024   0.096   0.194   0.317   0.542   0.619
p.global.shallow         0.103    0.043    0.014   0.026   0.075   0.106   0.134   0.171   0.184
NULL
```

Pukeuri

Sample size		n
Consumer	Grapevine	3
Source	shallow	3
	middle	9
	deep	3
	deeper	7

```
################################################################################
# Gelman-Rubin Diagnostic
################################################################################
Generally the Gelman diagnostic should be < 1.05
Out of 10 variables: 1 > 1.01
                     0 > 1.05
                     0 > 1.1
The worst variables are:
                  Point est.  Upper C.I.
resid.prop[2]       1.010815  1.018650
p.global[4]         1.006155  1.023181
p.global[1]         1.002745  1.008105
loglik[1]           1.002222  1.008486
p.global[2]         1.002083  1.006180
deviance            1.001756  1.006906
loglik[3]           1.001461  1.006238
loglik[2]           1.001198  1.004379
p.global[3]         1.000188  1.001280
resid.prop[1]       1.000152  1.001506
################################################################################
# Geweke Diagnostic
################################################################################
The Geweke diagnostic is a standard z-score, so we'd expect 5% to be outside +/-1.96
Number of variables outside +/-1.96 in each chain (out of 10):
      Chain 1 Chain 2 Chain 3
Geweke       5       0       2
################################################################################
# Summary Statistics
################################################################################
DIC = 10.68091
                  Mean        SD     2.5%      5%      25%      50%      75%      95%    97.5%
Epsilon.1        7.078  5.339  0.503  0.761  2.557  5.705  10.770           17.571           18.787
Epsilon.2        1.760  3.355  0.005  0.008  0.051  0.283   1.669  9.683  13.295
p.global.deep            0.500  0.228  0.054  0.101  0.327  0.516  0.684  0.841  0.880
p.global.deeper          0.312  0.177  0.025  0.048  0.174  0.295  0.437  0.620  0.691
p.global.middle          0.149  0.107  0.006  0.014  0.066  0.128  0.211  0.355  0.398
p.global.shallow         0.039  0.031  0.001  0.003  0.015  0.032  0.055  0.099  0.114
NULL
```