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*Soil Research*

### **Supplementary Material**

#### **Sensitivity analysis of soil parameters in the Agricultural Production Systems sIMulator (APSIM)**

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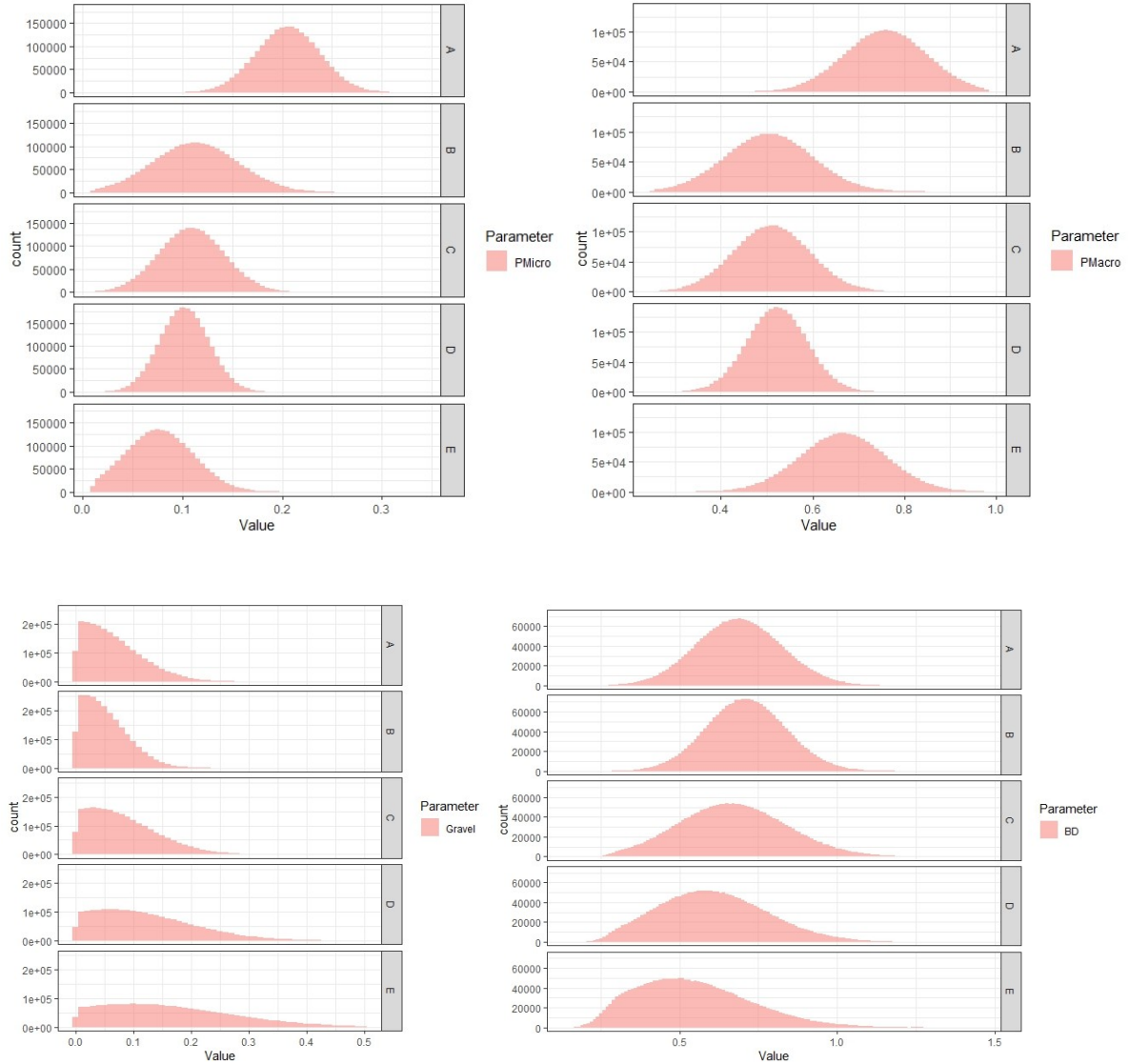
<sup>B</sup>The New Zealand Institute for Plant and Food Research Limited, Lincoln, New Zealand.

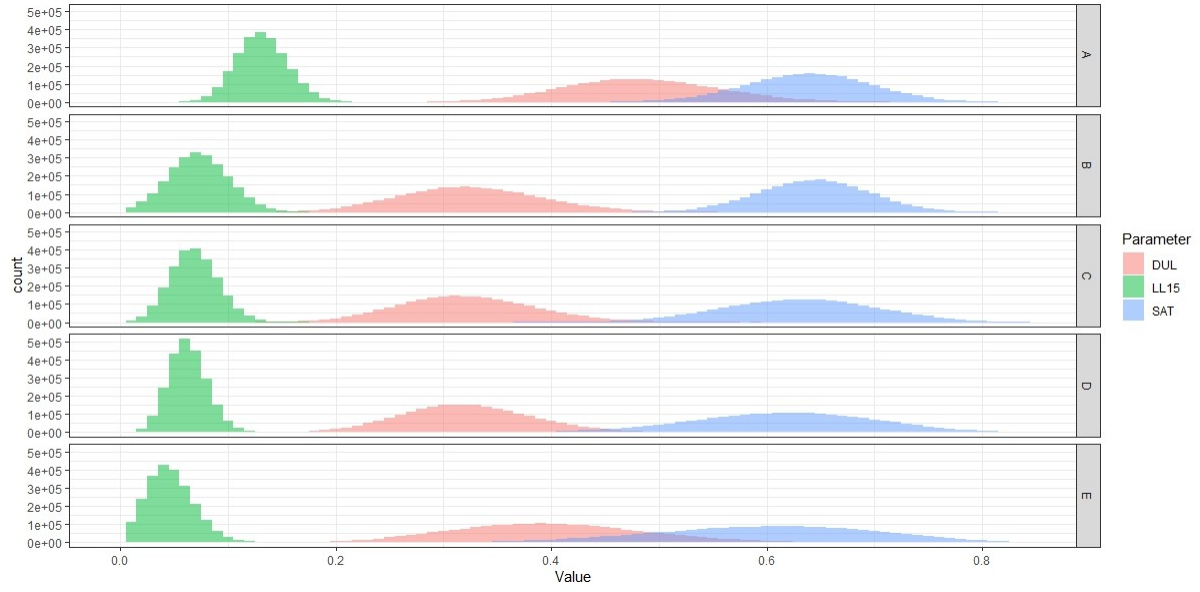
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# Supplementary Appendix 1

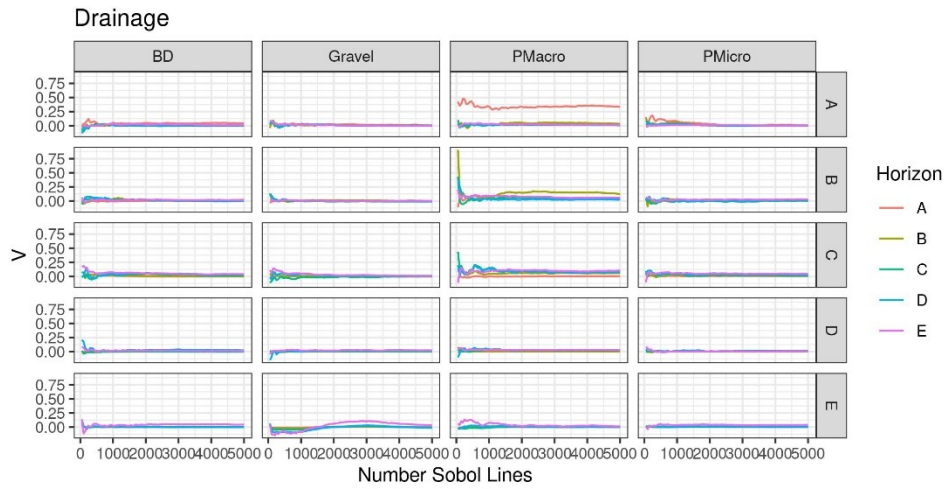
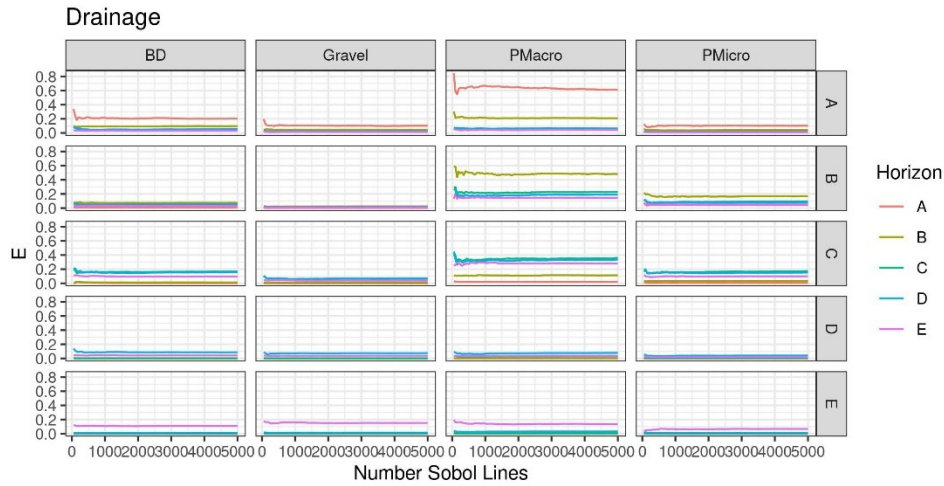
Examples of the outcomes of the sampling methodology are provided in the Appendix (A1) can be seen below. Here the fraction of pores  $<0.2 \mu\text{m}$ , and of pores  $<30 \mu\text{m}$  and bulk density are used to determine the input values for bulk density, LL15, DUL and SAT in APSIM.

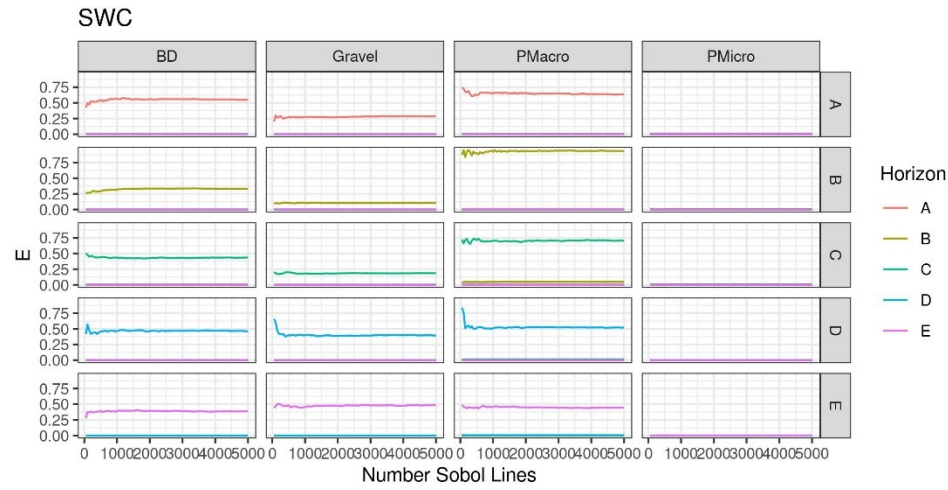
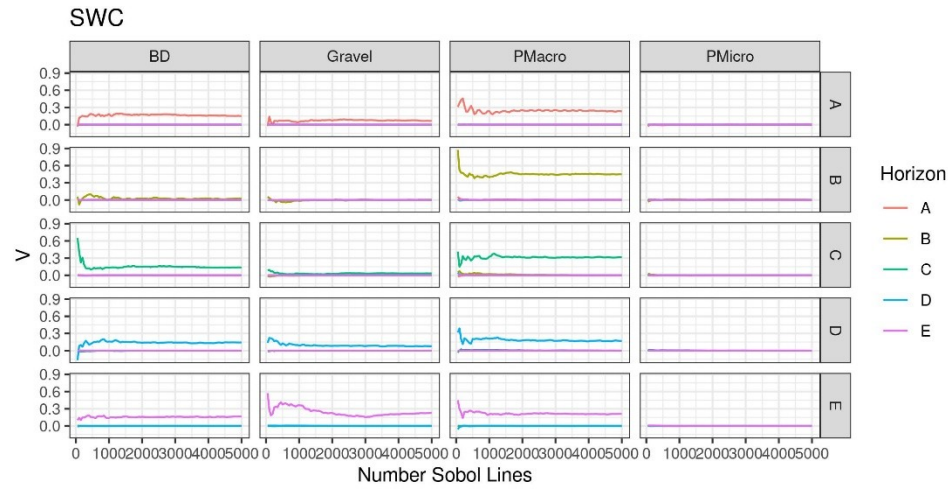




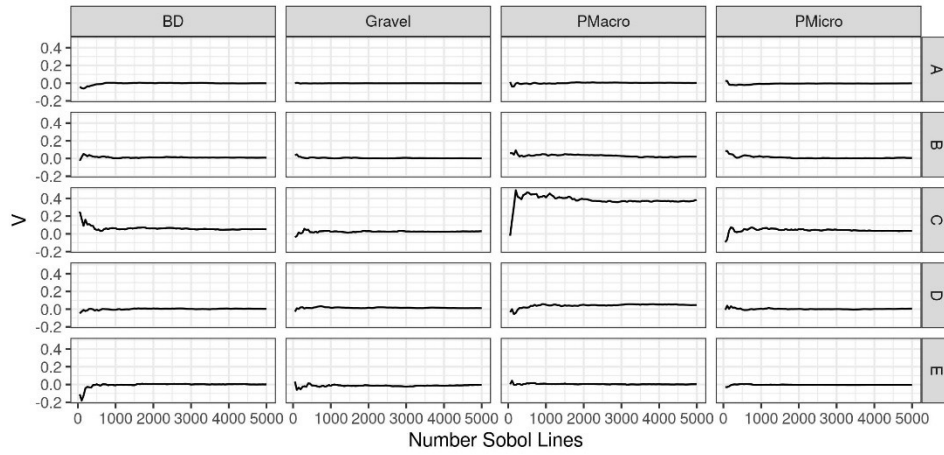
## Supplementary Appendix 2

Relationship between both first order (V) and total effects (E) for cumulative drainage, soil water content (SWC), N leaching and DM production as a function of the number of Sobol realisations.

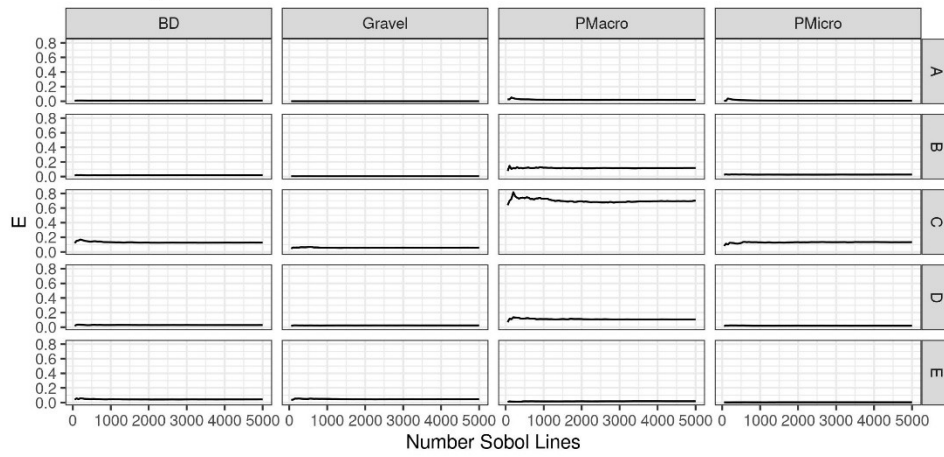




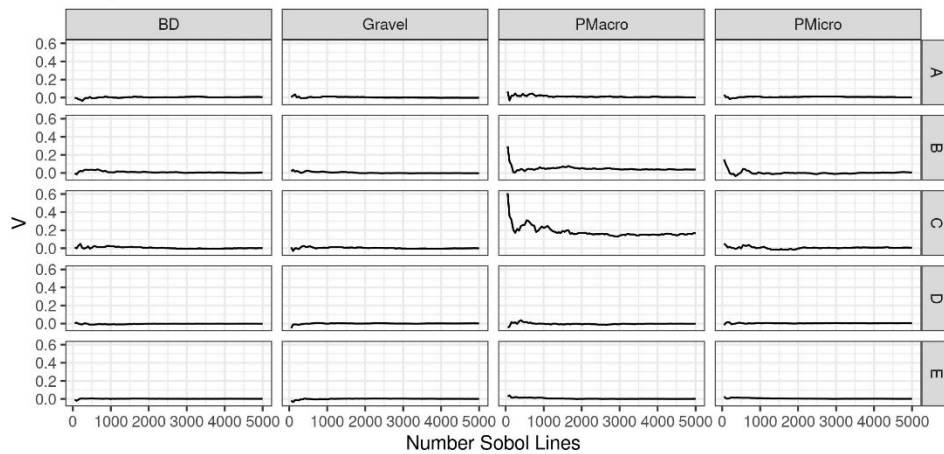
### Leaching



### Leaching



### DM production



### DM production

