

The supplement for: “Simulating soil C dynamics in Australia”

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Table S1. Sensitivities of total, particulate and humus organic C (TOC, POC and HOC) stocks to changes in the allocation of C inputs into the decomposable plant material (DPM) and resistant plant material (RPM) components. The amount of C inputs to the soil and soil organic C stocks were simulated by assuming soil C equilibrium. The estimates of soil organic C were the area weighted averages of the medians for the following land uses across Australia: cropping, modified grazing, native grazing and natural environments. The amount of C input, soil organic C stocks, and their interquartile range and root mean squared error (RMSE) are reported in Mg C ha⁻¹.

| DPM/RPM | n | C input | | | TOC | | | | | POC | | | | | HOC | | | | | |
|-----------|------|---------|-------|-------|--------|-------|-------|-------|------|--------|-------|-------|-------|------|--------|-------|-------|-------|------|-------|
| | | Median | 1st Q | 3rd Q | Median | 1st Q | 3rd Q | r^2 | RMSE | Median | 1st Q | 3rd Q | r^2 | RMSE | Median | 1st Q | 3rd Q | r^2 | RMSE | |
| Measured | 4431 | | | | 26.69 | 20.48 | 37.54 | | | 3.54 | 2.18 | 5.81 | | | 16.65 | 12.69 | 22.60 | | | |
| Simulated | | | | | | | | | | | | | | | | | | | | |
| | 0.67 | 4417 | 1.47 | 0.93 | 2.36 | 25.89 | 19.26 | 35.26 | 0.88 | 9.82 | 5.95 | 4.05 | 8.47 | 0.77 | 4.98 | 13.08 | 9.38 | 17.60 | 0.69 | 8.28 |
| | 0.96 | 4417 | 1.55 | 0.99 | 2.54 | 25.89 | 19.44 | 35.69 | 0.89 | 9.84 | 5.49 | 3.86 | 7.76 | 0.77 | 4.77 | 13.60 | 9.83 | 18.20 | 0.68 | 8.26 |
| | 1.17 | 4417 | 1.63 | 1.04 | 2.60 | 25.83 | 19.48 | 36.15 | 0.88 | 10.08 | 5.15 | 3.69 | 7.42 | 0.76 | 4.75 | 13.85 | 10.13 | 18.80 | 0.68 | 8.46 |
| | 1.44 | 4417 | 1.71 | 1.08 | 2.72 | 26.00 | 19.44 | 36.57 | 0.87 | 10.59 | 4.83 | 3.49 | 6.97 | 0.74 | 4.84 | 14.17 | 10.46 | 19.62 | 0.66 | 8.93 |
| | 1.78 | 4419 | 1.77 | 1.14 | 2.83 | 26.16 | 19.55 | 36.54 | 0.86 | 11.42 | 4.46 | 3.22 | 6.41 | 0.72 | 5.03 | 14.67 | 10.94 | 20.13 | 0.64 | 9.71 |
| | 2.23 | 4419 | 1.83 | 1.20 | 2.98 | 26.10 | 19.53 | 36.55 | 0.83 | 12.72 | 4.10 | 2.95 | 5.76 | 0.68 | 5.34 | 15.07 | 11.35 | 20.63 | 0.60 | 10.94 |