Table S2: *Brachystegia* grassland soils characterization.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| # | **Depth**  **(cm)** | **Particle size analysis** | | | **pH** | | | **Exchangeable bases (Cmole.dm-3)** | | | | **P**  **(mg.dm-3)** | **Al (mg.dm-3)** | **Al + H**  **(mg.dm-3)** | **CTC**  **(pH 7)** | **Sum of bases**  **(Cmole.dm-3)** | **V (%)** | m(%) |
| **clay (%)** | **silt (%)** | **sand (%)** | **H2O** | **KCl** | **Ca2Cl** | **K** | **Na** | **Ca** | **Mg** |
| 27001 | 0-10 | 9.50 | 5.50 | 85.00 | 5.13 | 4.30 | 4.39 | 16.15 | 0.00 | 0.84 | 4.54 | 3.52 | 0.30 | 4.60 | 26.42 | 21.52 | 81.45 | 18.55 |
| 27001 | 10-30 | 33.25 | 9.25 | 57.50 | 4.96 | 4.18 | 4.02 | 13.29 | 0.00 | 0.61 | 5.66 | 4.39 | 0.70 | 4.30 | 24.55 | 19.55 | 79.63 | 20.37 |
| 27001 | 30-50 | 32.00 | 13.00 | 55.00 | 4.78 | 4.36 | 4.14 | 11.38 | 0.00 | 0.62 | 7.41 | 4.66 | 0.50 | 4.00 | 23.92 | 19.42 | 81.19 | 18.81 |
| 27002 | 0-10 | 7.85 | 7.15 | 85.00 | 5.41 | 5.32 | 5.03 | 14.24 | 0.00 | 2.74 | 16.65 | 6.62 | 0.20 | 4.50 | 38.33 | 33.63 | 87.74 | 12.26 |
| 27002 | 10-30 | 3.25 | 6.75 | 90.00 | 4.92 | 4.50 | 4.55 | 10.43 | 0.00 | 0.68 | 0.00 | 3.39 | 0.30 | 4.30 | 15.71 | 11.11 | 70.72 | 29.28 |
| 27002 | 30-50 | 0.00 | 2.50 | 97.50 | 4.96 | 4.34 | 4.28 | 15.19 | 0.00 | 0.79 | 0.00 | 3.75 | 0.50 | 4.00 | 20.48 | 15.98 | 78.03 | 21.97 |
| 27003 | 0-10 | 18.50 | 9.00 | 72.50 | 5.10 | 4.48 | 4.47 | 8.53 | 0.00 | 1.03 | 0.00 | 5.66 | 0.50 | 4.40 | 14.45 | 9.55 | 66.09 | 33.91 |
| 27003 | 10-30 | 3.00 | 7.00 | 90.00 | 4.27 | 4.21 | 4.07 | 2.81 | 0.00 | 1.37 | 0.00 | 20.62 | 0.50 | 4.00 | 8.68 | 4.18 | 48.16 | 51.84 |
| 27003 | 30-50 | 12.50 | 7.50 | 80.00 | 4.12 | 4.16 | 4.00 | 1.86 | 0.00 | 1.55 | 0.00 | 8.52 | 0.50 | 3.90 | 7.81 | 3.41 | 43.66 | 56.34 |
| 27004 | 0-10 | 0.00 | 2.50 | 97.50 | 5.00 | 4.45 | 4.43 | 7.58 | 0.00 | 1.43 | 2.86 | 5.16 | 0.40 | 4.30 | 16.56 | 11.86 | 71.62 | 28.38 |
| 27004 | 10-30 | 2.50 | 2.50 | 95.00 | 4.15 | 4.20 | 4.04 | 3.77 | 0.00 | 1.65 | 3.03 | 3.93 | 0.60 | 4.20 | 13.25 | 8.45 | 63.77 | 36.23 |
| 27004 | 30-50 | 11.00 | 4.00 | 85.00 | 4.32 | 4.20 | 4.02 | 4.72 | 0.00 | 1.68 | 4.47 | 3.52 | 0.90 | 4.10 | 15.86 | 10.86 | 68.47 | 31.53 |
| 27007 | 0-10 | 0.25 | 6.00 | 93.75 | 5.33 | 5.11 | 4.82 | 10.43 | 0.00 | 3.46 | 11.26 | 4.34 | 0.30 | 3.70 | 29.15 | 25.15 | 86.28 | 13.72 |
| 27007 | 10-30 | 0.00 | 10.00 | 90.00 | 4.29 | 4.20 | 4.15 | 7.58 | 0.00 | 0.97 | 0.81 | 2.57 | 0.50 | 3.50 | 13.36 | 9.36 | 70.06 | 29.94 |
| 27007 | 30-50 | 10.85 | 9.15 | 80.00 | 4.08 | 4.06 | 3.93 | 12.34 | 0.00 | 1.39 | 1.99 | 3.62 | 1.40 | 4.10 | 21.21 | 15.71 | 74.07 | 25.93 |
| 27008 | 0-10 | 0.00 | 0.00 | 100.00 | 4.41 | 3.76 | 3.91 | 1.86 | 0.00 | 0.00 | 4.05 | 3.07 | 0.50 | 4.20 | 10.61 | 5.91 | 55.70 | 44.30 |
| 27008 | 10-30 | 3.20 | 4.00 | 50.30 | 4.37 | 4.16 | 4.02 | 1.86 | 0.00 | 0.00 | 4.99 | 3.43 | 0.40 | 3.70 | 10.95 | 6.85 | 62.56 | 37.44 |
| 27008 | 30-50 | 6.00 | 9.20 | 50.00 | 4.54 | 4.49 | 4.30 | 0.91 | 0.00 | 0.00 | 6.72 | 4.57 | 0.50 | 3.60 | 11.73 | 7.63 | 65.05 | 34.95 |
| 27009 | 0-10 | 2.00 | 7.20 | 60.00 | 4.99 | 4.47 | 4.48 | 4.72 | 0.00 | 1.53 | 3.08 | 4.12 | 0.40 | 4.20 | 13.93 | 9.33 | 66.98 | 33.02 |
| 27009 | 10-30 | 1.25 | 2.50 | 96.25 | 4.51 | 4.38 | 4.24 | 1.82 | 0.00 | 0.00 | 0.00 | 6.80 | 0.50 | 3.50 | 5.82 | 1.82 | 31.27 | 68.73 |
| 27009 | 30-50 | 0.40 | 5.85 | 93.75 | 4.34 | 3.34 | 4.20 | 1.82 | 0.00 | 8.32 | 0.00 | 3.89 | 0.40 | 3.60 | 14.14 | 10.14 | 71.71 | 28.29 |
| 27012 | 0-10 | 0.00 | 8.20 | 83.20 | 4.91 | 4.29 | 4.28 | 7.33 | 0.00 | 25.34 | 0.00 | 5.52 | 0.50 | 1.00 | 34.17 | 32.67 | 95.61 | 4.39 |
| 27012 | 10-30 | 10.85 | 9.40 | 84.50 | 4.45 | 4.23 | 4.11 | 2.74 | 0.00 | 35.94 | 0.00 | 9.84 | 0.60 | 0.20 | 39.48 | 38.68 | 97.97 | 2.03 |
| 27012 | 30-50 | 3.20 | 6.15 | 85.30 | 4.28 | 4.14 | 4.00 | 2.74 | 0.00 | 48.31 | 0.00 | 7.80 | 0.90 | 0.20 | 52.15 | 51.05 | 97.89 | 2.11 |
| 27013 | 0-10 | 1.25 | 6.00 | 86.20 | 5.27 | 4.72 | 4.69 | 14.67 | 0.00 | 0.00 | 0.00 | 4.62 | 0.30 | 0.60 | 15.57 | 14.67 | 94.22 | 5.78 |
| 27013 | 10-30 | 0.40 | 4.00 | 87.25 | 5.09 | 4.37 | 4.40 | 9.16 | 0.00 | 7.10 | 0.00 | 6.02 | 0.40 | 0.40 | 17.06 | 16.26 | 95.31 | 4.69 |
| 27013 | 30-50 | 0.30 | 2.00 | 88.50 | 4.96 | 4.20 | 4.14 | 22.01 | 0.00 | 20.14 | 0.00 | 7.34 | 1.30 | 0.60 | 44.05 | 42.15 | 95.69 | 4.31 |
| 27014 | 0-10 | 0.50 | 0.00 | 89.40 | 4.59 | 3.98 | 4.07 | 7.33 | 0.00 | 29.04 | 0.00 | 4.52 | 0.50 | 1.00 | 37.87 | 36.37 | 96.04 | 3.96 |
| 27014 | 10-30 | 0.25 | 6.00 | 93.75 | 4.31 | 4.13 | 4.03 | 2.74 | 0.00 | 40.49 | 0.00 | 9.34 | 0.90 | 0.80 | 44.93 | 43.23 | 96.22 | 3.78 |
| 27014 | 30-50 | 3.50 | 6.50 | 90.00 | 4.14 | 4.12 | 4.05 | 1.82 | 0.00 | 0.00 | 0.00 | 8.89 | 0.60 | 0.60 | 3.02 | 1.82 | 60.26 | 39.74 |
| 27015 | 0-10 | 0.00 | 3.75 | 96.25 | 4.93 | 4.41 | 4.44 | 6.41 | 0.00 | 11.94 | 0.00 | 6.02 | 0.50 | 0.20 | 19.05 | 18.35 | 96.33 | 3.67 |
| 27015 | 10-30 | 3.50 | 6.50 | 90.00 | 4.84 | 4.14 | 4.09 | 5.49 | 0.00 | 19.43 | 0.00 | 8.16 | 0.60 | 0.20 | 25.72 | 24.92 | 96.89 | 3.11 |
| 27015 | 30-50 | 3.00 | 14.50 | 82.50 | 4.52 | 4.09 | 3.98 | 7.33 | 0.00 | 28.66 | 0.00 | 5.80 | 1.00 | 0.60 | 37.59 | 35.99 | 95.74 | 4.26 |
| 27016 | 0-10 | 0.00 | 2.50 | 97.50 | 4.91 | 4.35 | 4.38 | 3.77 | 0.00 | 0.00 | 0.57 | 5.80 | 0.30 | 0.20 | 4.83 | 4.33 | 89.65 | 10.35 |
| 27016 | 10-30 | 4.25 | 5.75 | 90.00 | 4.93 | 4.26 | 4.09 | 1.86 | 0.00 | 0.00 | 0.69 | 5.80 | 0.30 | 1.60 | 4.45 | 2.55 | 57.30 | 42.70 |
| 27016 | 30-50 | 7.80 | 2.20 | 90.00 | 4.56 | 4.26 | 4.08 | 1.86 | 0.00 | 0.00 | 0.80 | 6.89 | 0.60 | 0.20 | 3.46 | 2.66 | 76.88 | 23.12 |
| 27017 | 0-10 | 4.50 | 8.00 | 87.50 | 4.81 | 4.74 | 4.76 | 1.86 | 0.00 | 0.00 | 1.18 | 4.66 | 0.30 | 0.80 | 4.14 | 3.04 | 73.43 | 26.57 |
| 27017 | 10-30 | 5.25 | 7.25 | 87.50 | 5.40 | 4.48 | 4.68 | 5.67 | 0.00 | 0.00 | 0.00 | 4.66 | 0.20 | 0.60 | 6.47 | 5.67 | 87.64 | 12.36 |
| 27017 | 30-50 | 4.88 | 7.63 | 87.50 | 5.11 | 4.61 | 4.72 | 3.77 | 0.00 | 0.00 | 0.59 | 4.66 | 0.25 | 0.70 | 5.31 | 4.36 | 82.11 | 17.89 |
| 27018 | 0-10 | 5.25 | 9.75 | 85.00 | 5.57 | 4.75 | 4.78 | 10.43 | 0.00 | 0.00 | 0.00 | 4.66 | 0.20 | 1.20 | 11.83 | 10.43 | 88.17 | 11.83 |
| 27018 | 10-30 | 7.63 | 8.63 | 83.75 | 5.28 | 4.45 | 4.46 | 5.53 | 0.00 | 0.01 | 0.00 | 5.05 | 0.40 | 0.90 | 9.83 | 8.53 | 86.78 | 13.22 |
| 27018 | 30-50 | 10.00 | 7.50 | 82.50 | 4.98 | 4.14 | 4.14 | 0.62 | 0.00 | 0.01 | 0.00 | 5.43 | 0.60 | 0.60 | 7.83 | 6.63 | 84.67 | 15.33 |