

Table S1. Physical and chemical properties of soil.

| Properties | Unit | Results |
|----------------|---------------------|---------|
| Sand | | 81.5 |
| Silt | | 13.50 |
| Clay | % | 5 |
| N | | 0.30 |
| P | | 68 |
| K | mg kg ⁻¹ | 968 |
| Organic matter | % | 5.17 |
| pH | | 6.78 |
| EC | dS m ⁻¹ | 0.7 |

Table S2. Physical and chemical properties of biochar.

| Properties | Unit | Results |
|------------------------|-----------------------------|---------|
| C | | 71.79 |
| H | | 0.76 |
| N | g 100g ⁻¹ | 0.58 |
| S | | 0 |
| Ca | | 3.06 |
| P | | 2.83 |
| K | g kg ⁻¹ | 1.05 |
| Mg | | 0.76 |
| Na | | 0.33 |
| Zn | | 36.09 |
| Cr | mg kg ⁻¹ | 21.25 |
| Cd | | 1.37 |
| pH | | 8.2 |
| EC | dS m ⁻¹ at 25 °C | 0.38 |
| Bulk density | g m ⁻³ | 0.22 |
| Mean particle diameter | mm | <5.0 |