Supplementary materials

Remediation of Post Tin-mined Land - Evaluation of Local Soil Amendments on Crop Yield and Drought Resistance

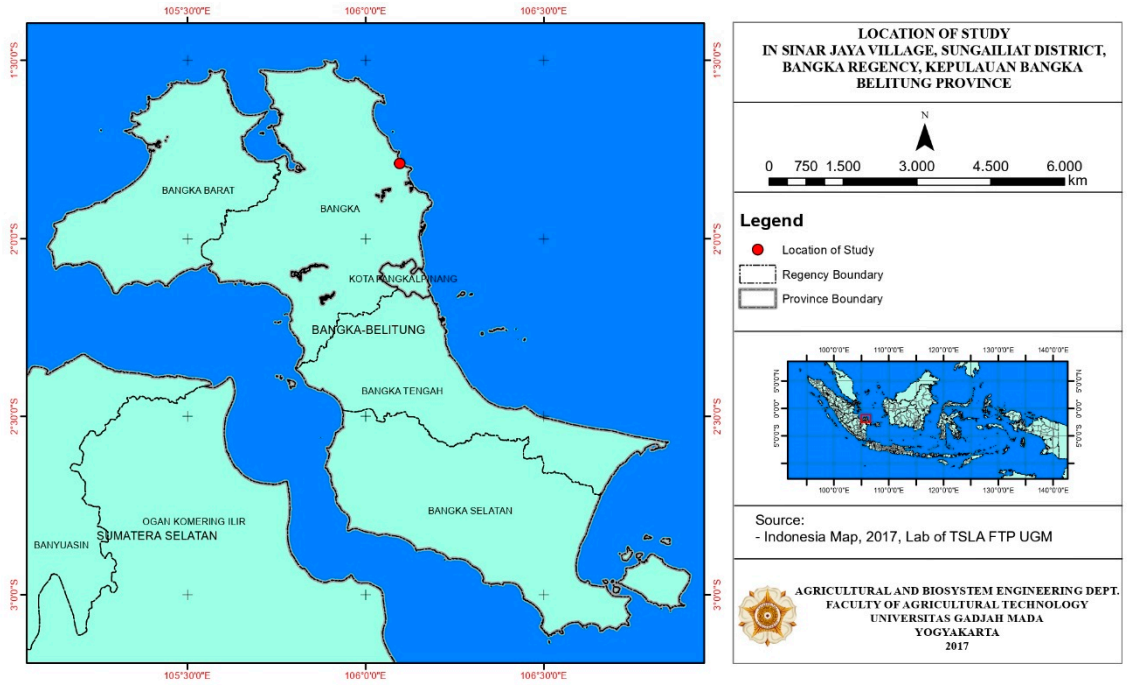

Figure S1. Study site in Bangka Regency, Bangka Belitung Islands Province, Indonesia. The red point indicates the location of the plot experiment.

Figure S2. Initial condition of the experimental site

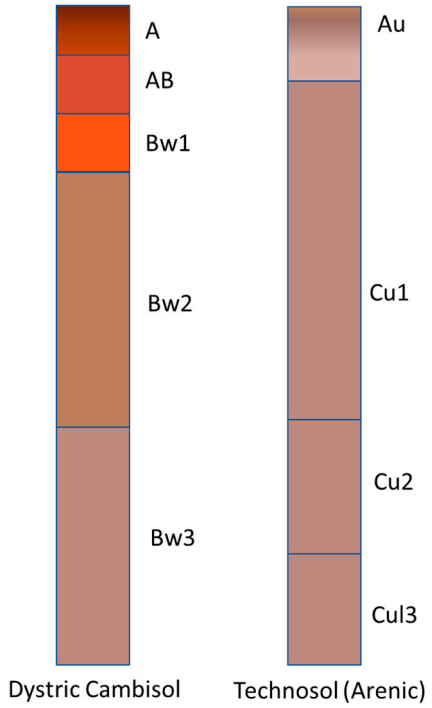

Figure S3. Soil profile of the original soil near the experimental site (Dystric Cambisol) and soil after tin mining activities (Technosol) [1,2]. The mining activity influences the topsoil and subsoil of the area. The result is a soil degradation and genesis of an artificial soil.

The Dystric cambisol consists of an A layer (Topsoil with more than 1% soil organic carbon), AB layer (Transition soil horizon from A and B (Transitional horizons)), and Bw layer (Cambic horizon with highly weathered bedrock material).
The Technosol (Arenic) consists of an Au layer (Topsoil with urban and other human-made materials material), Cu layer (Subsurface horizons excluding hard bedrock, but little affected by pedogenetic processes, and resulting from an industrial process or mining activities), and Cul layer (Subsurface horizons excluding hard bedrock, but little affected by pedogenetic processes, and resulting from an industrial process or mining activities, capillary fringe mottling (gleying)).

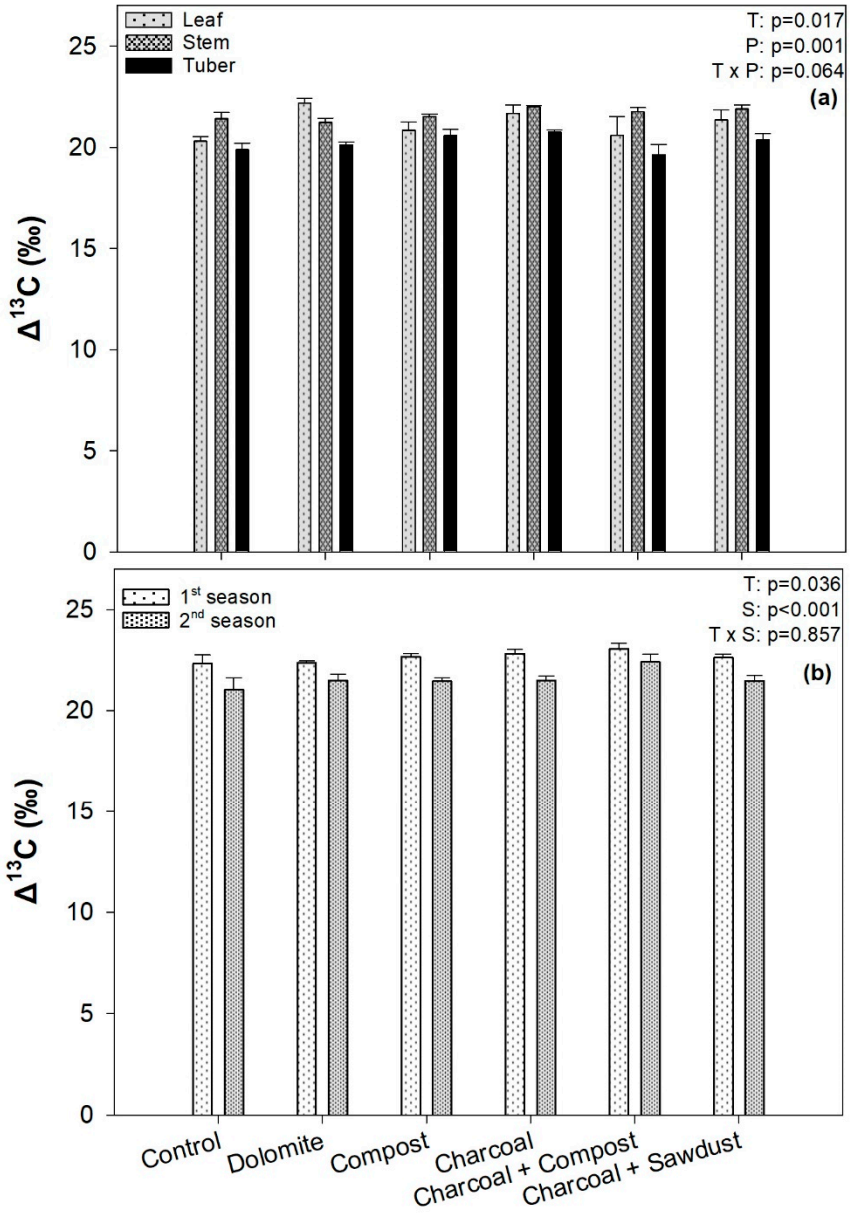

Figure S4. Carbon isotope discrimination ($\Delta^{13}C$) of plant part in cassava (a) and carbon isotope discrimination ($\Delta^{13}C$) of 1st and 2nd season centrosema (b) in different soil amendment treatments. Given are mean ± SE (n = 4). P-values are shown in the upper right corner for cassava and centrosema as revealed by two-way ANOVA.

Table S1. Summary of the parametric and robust one-way ANOVA on crop yields and $\Delta^{13}C$ in centrosema.

Parameters	F-value	P-value	Significance
Yields			
Tuber cassava	24.403	<0.001	***
Shoot cassava	23.481	<0.001	***
Centrosema 1st season	28.519	<0.001	***
Centrosema 2nd season	2.71	0.1002	ns
Weed	8.74	0.0060	**
Isotope carbon			
Centrosema 1st season	1.236	0.333	ns
Centrosema 2nd season	1.677	0.197	ns

Table S2. Summary of the parametric and robust one-way ANOVA on soil parameters at harvest time

Parameters	F-value	P-value	Significance
pH	48.509	<0.001	***
CEC	44.805	<0.001	***
TN	1.445	0.313	ns
TOC	8.284	0.005	**
DOC	12.684	<0.001	***
TP	18.821	<0.001	***
AP	16.059	<0.001	***
TK	0.483	0.784	ns
AK	14.589	<0.001	***
EC	59.122	<0.001	***
WHC	2.886	0.044	*