Supplementary Tables

**Table S1**

Characterization of saline-sodic soil

|  |  |
| --- | --- |
| Characterization  | Soil |
| Soil pH (1:2.5 w: v) | 8.84 ± 0.05 |
| Soil ECe (dS m-1) | 5.43 ± 0.10 |
| Soil total N (g kg-1) | 0.02 ± 0.001 |
| Soil available P (mg kg-1) | 1.20 ± 0.07 |
| Soil available K+ (mg kg-1) | 78.1 ±0.44 |
| Soil total CaCO3 (%) | 18.6 ± 1.35 |
| Soil CEC (cmol+ kg-1) | 7.56 ± 0.24 |
| Soil organic Carbon (g kg-1)  | 1.03 ± 0.01 |
| Soil ESP\*\* (%) | 53.1 ± 1.93 |
| Soil С: N Ratio | 49.14 ± 2.1 |
| Soil micronutrients (mg kg-1) |  |
| Fe2+ | 0.08 ± 0.01 |
| Zn2+ | Nd\* |
| Mn2+ | 0.11 ± 0.020 |
| Cu2+ | 0.003 ± 0.01 |
| B+ | Nd\* |
| Cl- | 192 ± 0.166 |

## Nd\*= not detected; ESP\*\* = Exchangeable sodium percentage

Table S2

 Organic and biological ameliorants application rates in saline-sodic soil

|  |
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| Treatment description and application rates  |
| CK | Control (without additives) |
| NPK | \*Mineral fertilizers (NPK) contained 178: 70: 100 units of urea, calcium phosphate, and potassium sulfate |
| Az | *A. brasilense* inoculation with soil and seeds |
| SG1 | Spent grain level 1 (23.8 t ha-1) |
| SG2 | Spent grain level 2 (47.6 t ha-1) |
| TC1 | Compost level 1(23.8 t ha-1) |
| TC2 | Compost level 2 (23.8 t ha-1) |
| Az+SG1 | *A. brasilense* + Spent grain (Az+SG1) |
| Az+TC1 | *A. brasilense* + Compost (Az+TC1) |

Note: \*=100% of NPK recommended dose, is (urea (46%) - 178 unit of N ha-1, P2O5 (45%) - 70 unit of P2O5 / ha, K2O (50%) – 100 unit of K2O ha-1).