

**Supplementary Table S1:** A list of studies that used combined gypsum and bio- and/or organic amendments in mitigating salinity stress.

Treatments	Experimental condition	Reference
Gypsum + Sulfur + PK rock biofertilizer ( <i>Bradyrhizobium</i> strains NFB 516 and NFB 700) + <i>Acidithiobacillus thiooxidans</i>	Greenhouse (pot experiment)	[1]
Gypsum + Farmyard manure	Field	[2]
Gypsum + Compost	Field	[3]
Gypsum + Water hyacinth compost + Rice straw compost	Soil columns	[4]
Gypsum + Farmyard manure + Humic acid	Field	[5]
Gypsum + Organic matter (leucerne hay and green manuring with pasture crops)	Field	[6]
Gypsum + Bacteria ( <i>Bacillus subtilis</i> OSU 142 and <i>Bacillus megaterium</i> M3) + Fungi ( <i>Aspergillus</i> spp. FS 9, 11 and <i>Alternaria</i> spp. FS 8)	Soil columns	[7]
Gypsum + Compost tea + biochar	Field	[8]

1. Stamford, N.P., et al., *Effect of gypsum and sulfur with Acidithiobacillus on soil salinity alleviation and on cowpea biomass and nutrient status as affected by PK rock biofertilizer*. Scientia Horticulturae, 2015. **192**: p. 287-292.
2. Ahmed, K., et al., *Gypsum and farm manure application with chiseling improve soil properties and performance of fodder beet under saline-sodic conditions*. International Journal of Agriculture and Biology, 2015. **17**(06): p. 1225-1230.
3. Kitila, K., A. Chala, and M. Workina, *Effect of gypsum and compost application in reclaiming sodic soils at small scale irrigation farm in Bora District of East Shewa Zone, Oromia, Ethiopia*. Agriways, 2020. **08**(01): p. 28-44.
4. Abdel-Fattah, M.K., *Role of gypsum and compost in reclaiming saline-sodic soils*. Journal of Agriculture and Veterinary Science, 2012. **1**(3): p. 30-38.
5. Shaaban, M., M. Abid, and S. Abou, *Amelioration of salt affected soils in rice paddy system by application of organic and inorganic amendments*. Plant Soil Environ, 2013. **59**(5): p. 227-233.
6. Vance, W.H., J.M. Tisdall, and B.M. McKenzie, *Residual effects of surface applications of organic matter and calcium salts on the subsoil of a red-brown earth*. Australian Journal of Experimental Agriculture, 1998. **38**: p. 595-600.
7. Sahin, U., S. Eroğlu, and F. Sahin, *Microbial application with gypsum increases the saturated hydraulic conductivity of saline-sodic soils*. Applied Soil Ecology, 2011. **48**(2): p. 247-250.
8. Bayoumy, M., T. Khalifa, and H. Aboelsoud, *Impact of some organic and inorganic amendments on some soil properties and wheat production under saline-sodic soil* Journal of Soil Science and Agricultural Engineering, 2019. **10**(5): p. 307-313.