Abstract

Cooper (Cu) stress is a serious problem in contaminated soils that causes significant reduction in okra growth and production. To determine the toxic effect of Cu on okra plant and identify an effective way to mitigate Cu toxicity on okra, seeds of okra were inoculated with *Bacillus subtilis* and were sown with farm manure and non-manure treatments carrying different concentrations of Cu at 400 mg kg^{-1} of soil Cu, 450 mg kg^{-1} of soil Cu and 500 mg kg^{-1} of soil-Cu that were arranged in thirteen treatment combination in a completely randomized design (CRD). Thirty days old seedlings of okra were evaluated for its response to the treatments. The results indicate that *Bacillus subtilis* and farm manure significantly improved okra growth compared to control.In opposite the use of farmyard manure and *Bacillus subtilis* significantly increased okra seedling growth (9%) and (67% and 6% in plant length) due to their beneficially properties in promoting plant growth.When cpmpared to the control, the addition of *Bacillus subtilis* to farmyard manure significantly increased plant height, root length, leaf chlorophyll a and b, leaf relative water content, respectively, compared to control.Hence the application of *Bacillus subtilis* with the interaction of farmyard manure to be a cost-effective and eco-friendly soil conditioner in developing countries including Pakistan to limit the adverse effect of Copper contamination.The findings of of this study show that combining *Bacillus subtilis* with farmyard manure is a suitable srrategy for reducing the toxic effects of Cu while ensureing sustainable production of okra.