

The objective of this study was to determine the effect of inorganic compounds treatment(s) namely: ChalimTM (CM), a chlorine-containing compound, metham sodium (MS) (positive control) and Co (negative control) versus organic compound such as *Brassica* tissue treatment (BT), on soil pH, micro and macroelements. Three levels of ChalimTM and that of *Brassica* tissue; one of MS and one for Co were used. The test crops included were; Tomato, capsicum and potato. All the plots were inoculated with *R. solanacearum* to a level of approximately 7.5×10^7 Colony forming unit (CFU) per plot. Soil samples were taken using zigzag method after which the selected parameter levels were determined at the beginning and at the end of each season for three seasons (2009-2010). The amendments were prepared and applied in the field plots measuring (4.5×2.7 M) in randomized complete block design at Kenya agricultural research institute National agricultural laboratories in plant pathology section and Department of Plant and Microbial Sciences, Kenyatta university. The effects of the soil amendments on soil physico-chemical properties and yields were determined. The findings established that, Brassica tissue, at highest level of application was the best soil amendment to be incorporated since more nutrients and yields were realized at that treatment as compared to the others. The various treatments differed significantly on their effect on the total yields. In tomato, the various treatments differed significantly ($P < 0.05$) with plants grown on MS200 and BT5292 having significantly higher yields than the control. The study revealed that BT5292 increased the soil pH, yields, Nitrogen content, organic carbon, calcium and potassium concentration as compared to the other treatments and the control.