

Clay content, pH, organic matter content (%C), cation exchange capacity (CEC), exchangeable Al, exchangeable Mn, exchangeable acidity (ACe), residual acidity (ACr) and total acidity of 26 agricultural soils were determined. These were correlated with each other and with lime requirement values to three pH targets (5.5, 6.0, 6.5), measured by various methods. The effect of lime on ACe, ACr, exchangeable Al, exchangeable Mn and soil pH was studied by moist CaCO₃-incubation. Organic matter content was the most influential factor in the buffering capacities of these soils against changes in pH. Although ACr dominated the soil acidity components, ACe was the best index of lime requirement of these soils. Exchangeable Al and Mn were virtually eliminated in all soils at a soil pH of about 5.5.