

Abstract

A survey of trace mineral concentrations in herbage in the Mt Elgon region of western Kenya is described. A total of 135 samples of mature herbage from 84 farms covering 30 000 km² was analysed for cobalt (Co), copper (Cu), iron (Fe), manganese (Mn), molybdenum (Mo), selenium (Se), and zinc (Zn). Mean (\pm standard deviation) concentrations [mg kg⁻¹ dry matter (DM)] were Co, 0.2 (0.16); Cu, 4.0 (1.6); Fe, 300 (169); Mn, 220 (128); Mo, 1.1 (0.23); Se, 0.1 (0.03); Zn, 23.6 (9.4). Copper and Zn concentrations were low compared with surveys in other tropical countries but this may partly reflect the mature stage at which herbage was sampled. Comparisons with recent estimates of the mineral requirements of ruminants indicated that most of the samples were deficient in Cu. A minority of the pastures contained less Se and Zn than ruminants are thought to require, but deficiencies of Co, Fe, and Mn were rare. Iron may be more significant as an antagonist of Cu but Mo rarely reached concentrations high enough to be antagonistic to Cu. The possibility of constraints upon livestock production should be investigated by supplementation trials with grazing livestock beginning with Cu.