Abstract

Degraded rangelands resulting from continuous overgrazing, frequent drought, termites, uncontrolled burning, opportunistic cultivation and other anthropogenic factors could be rehabilitated through reseeding. However, in semi-arid areas where reseeding ought to be more successful, such attempts have failed even when the rains are normal. An onstation study was carried out with rangeland grasses potted in a common soil, orthic Ferralsol, subjected to same amount of watering provided in four regimes over 70 days. The grasses were *Cenchrus ciliaris* (L), *Chloris roxburghiana (*Shult.), *Enteropogon macrostachyus* (A. Rich) and *Eragrostis superba (*Peyr.*)*. Watering frequency affected soil moisture, seedling counts and seedling growth performance of all four species. Generally, grasses performed best under every third day watering. This not only demonstrated that soil moisture content is an important factor influencing seed germination and subsequent plant development of all the four grasses but also that rainfall storm frequency characteristics would influence reseeding success even when the seasonal total is normal.