

Impact of some soil factors on seed germination of some of the common weeds

Studies were carried out to investigate the effect of depth of burial of seeds, soil moisture content, hydration followed by periods of dehydration and soil surface heterogeneity on germination and seedling emergence of seven species; *Ageratum conyzoides*, *eleutherenthera ruderalis*, *eupatorium riparium*, *Emilia sonchifolia*, *Mikania scandens*, *Tridax procumbens* & *Verrnonia cinerea* of compositae family, and three common species *aerua lanata*, *Amaranthus spinosus* & *amarathus viridis* which belongs to the family Amaranthaceae,

In all species the percentage of germination increased significantly with increasing soil moisture level up to 32% ($p < 0.001$). This was more pronounced in *E. sonchifolia*. And the percentage of germination was increased up to 72% and 80% under 16% and 32% moisture levels, respectively. Seeds of *E. ruderalis* can germinate more in a drier soil than the other species. Both germination and seedling emergence decreased with increasing depth of burial ($p < 0.001$). Only few seeds emerged from below one a cm in many of the species. But the germination and emergence of *A. spinosus* was significantly higher ($p < 0.05$) even at a soil depth of 3 cm. the desiccation of moistened seeds substantially delayed germination without affecting the final percentage for many species studied. This delay was directly related to the duration of dehydration. In all the species considerably more seeds germinated at a faster rate in hollows than in hummocks ($p < 0.001$). The maximum germination occurred in deeper hollows and the minimum on large hummocks.