ABSTRACT

Terminalia brownii is among the dominant multipurpose tree species in the Kenyan drylands whose regeneration is hampered by poor seed germination. It is used for building, fencing, herbal medicine, wood carving, and woodfuel among others. A study to assess fungal pathogens that infest T. brownii floral phenophases was conducted in Baringo, Kendu Bay and Kitui Bay. Flower-buds, flowers and immature were sampled for culturing from 30 trees selected randomly within 5.0 ha area in each site and GPS coordinates recorded. Samples of 100 flowerbuds, flowers, immature and mature fruits were surface sterilized using 10% sodium hypochlorite for 2 minutes and rinsed in distilled water. These were plated on Malt Extract Agar (MEA) media and incubated at 28 ± 2°C for seven days; fungal colonies were evaluated and subcultured to obtain pure cultures and pathogens were identified using morphological characteristics. Statistical analyses were carried out using GENSTAT version 18 and means separated using Turkeys test. Common fungal pathogens isolated were Pestalotia (53-57%), Fusarium spp (12-19%), Rhizopus (16-21%) and Cladosporium species (1-5%). While that of Bostrosphaeria, Trichoderma and Alternaria species were less than 2.5% in all sampled floral phenophases. There were significant differences ($p<0.005$) of fungal infestation between flowerbuds, flowers, immature and mature fruits, but not across sites. Flower-buds had the least of isolated fungal pathogens, thus indicating that infestation took place during and after flowering. These fungi may affect seeds and germination by either causing seed deterioration or affecting the germinants hence lowering seed quality. Keywords: Terminalia brownii, agroforestry, domestication, fungal-pathogens.