Seed dormancy and germination pattern of Andrographis paniculata at different maturity stages

ABSTRACT

Andrographis paniculata, from the Acanthaceae family, is commonly known as hempedu bumi or 'King of Bitters' and is propagated through seeds. However, dormancy and poor germination hamper cultivation of this species. Thus, an experiment was carried out to determine the effects of seed maturity stage, storage duration and sandpaper scarification on germination of A. paniculata seeds. After scarification, 83 and 96% germination was achieved for grey-purple and grey-brown capsule seeds, respectively, as compared with non-scarified seeds which recorded < 30% germination. Both storage duration and maturity stage affected germination. Seeds from grey-brown capsules stored for nine months reached 50% germination one day earlier than unstored seeds; for seeds from grey-purple capsules, germination was two days earlier. The best germination results were achieved for seeds from grey-brown capsules stored for nine months and scarified using sandpaper.

Keyword: Seed dormancy; Germination pattern; Andrographis paniculata; Seed maturity stage