

SEED GERMINATION STUDIES OF SELECTED ANNUAL WILD SPECIES FOR LOW MAINTENANCE PLANTING DESIGNS

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Floral enrichment using annual wild flowers is one of the most common strategies used in developed countries to conserve and maximize bio diversity. However, information on seed germination abilities of most of these species is not available. To select plant species for a low maintenance planting designs, information on their seed germination abilities are of great significance. The objectives of the study were to identify seed germination potential of eight annual wild species and seed treatments that could be applied to improve seed germination of the selected species. Based on morphological features, *Spermacoce assurgens*, *Leucas zeylanica*, *Tridax procumbens*, *Merremia tridentata*, *Emilia sonchifolia*, *Ipomoea triloba*, *Vernonia cinera* and *Cleome rutidosperma* were selected. A germination test was conducted and based on results; different treatments were applied to break seed dormancy of the species with low seed germination percentages. The data were analyzed using Statistical Analysis System (SAS). The study revealed significant differences in seed germination percentages and in dormancy breaking treatments among different species ($P < 0.05$). The highest germination percentages were recorded in *S. assurgens* (100 ± 0.0) followed by *V. cinera* (95 ± 7.0), *T. procumbens* (77.5 ± 3.5) and *E. sonchifolia* (62.5 ± 10.6). Untreated seeds of the rest of the species had low germination percentages. However, when seeds were scarified with sandpaper (P-600), a significantly high germination percentage was recorded for *M. tridentate* (97.5 ± 3.5) and *L. zeylanica* (50 ± 7.0). Further, the germination percentage of *I. trilobata* improved up to $52.5 (\pm 3.5)$ when seeds were treated with boiling water (100°C) for one minute. However, in *C. rutidosperma*, out of the sixteen treatments used, the highest germination percentage of 7.5 was recorded only when seeds were boiled in water for 5 minutes. Therefore, to establish low maintenance planting designs with wild species, *S. assurgens*, *T. procumbens*, *E. sonchifolia* and *V. cinera* can be recommended with direct seeding while *M. tridentate*, *L. zeylanica* and *I. triloba* can be recommended after respective seed dormancy breaking treatments.

This project was funded by grants (SRHDC/RP/04 13-03) received from Wayamba University of Sri Lanka and Ministry of Environment and Renewable Energy

Keywords: Low maintenance, Planting designs, Seed dormancy, Seed germination, Wild species