

Abstract

This study was conducted with the purpose of investigating the effect of drying spiderplant seeds under direct sunlight and shade, on germination performance. The plant materials used in the study were four morphotype selections: Green Stem/Green Petiole (GG), Green Stem/Purple Petiole (GP), Purple Stem/Green Petiole (PG) and Purple Stem/Purple Petiole (PP) made from mixed ecotype collections of spiderplant sourced from Kakamega and Uasin Gishu Districts in Western Kenya. The morphotypes were raised in a plastic-covered green house at the Department of Crop Science and Seed Technology, Moi University, Eldoret, Kenya. The pods of each morphotype were harvested and bulked separately as they matured and turned yellow. The pods were threshed immediately after harvesting and one portion of the seeds was dried under shade for 7 days, while the other portion was dried under direct sunlight for 4 days. The germination test was performed in the research laboratory at Plant Research International, Wageningen, The Netherlands. Four replicates each of 50 seeds, for the four morphotypes, were incubated in the germination cabinet at 30 °C under continuous darkness. Radicle protrusion was monitored regularly between 9 and 120 hours, from the start of incubation. The time taken to reach 50% maximum germination (T50), mean germination time (MGT) and percent maximum germination (Gmax) were calculated using the software package SeedCalculator version 3.0 (Plant Research International, The Netherlands). Sun drying resulted in significantly lower T50 and MGT, for morphotype PP, and significantly higher Gmax for morphotypes GP and PG, compared to shade drying. In conclusion the results obtained indicate generally that sun drying of spiderplant seeds has some improvement effect on seed quality, as shown by the lowered T50 in one of the four morphotypes and increased Gmax in two of the four morphotypes.