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**DORMANCY BREAKING METHODS, *IN-SITU* AND *EX-SITU* CONSERVATION OF**

**SRI LANKAN ENDEMIC WILD RICE *ORYZA RHIZOMATIS***

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Sri Lanka consisted of five wild rice species. Among these *Oryza rhizomatis* is endemic and distributed only in the low country dry zone of Sri Lanka. According to the previous literature it has been shown that some of the previously recorded populations of this species are declining due to natural and anthropogenic processes. Thus, this study was conducted to determine the conservation status and the seed biology of *O. rhizomatis*. *Ex-situ* conservation data were gathered from seed banks (43) national herbarium (02) and literature (46) and confirmed using field surveys. Seed germination and effect of dormancy breaking treatments were studied using freshly collected seeds. Field survey revealed that 13 out of 46 previously recorded populations have disappeared in the wild. Only 28 % of the existing populations were inside protected areas while only 26% of the population was conserved *ex-situ*. Thus, high priority should be given for *in-situ* and *ex-situ* conservation of *O.rhizomatis*. Seeds were identified as dormant since no germination was observed for the intact fresh seeds. Percentage mass increments, after 48 hours imbibition of scarified and non-scarified seeds were not significantly different, revealing that seeds have no physical dormancy. Embryo has not developed prior to germination so physiological dormancy is the possible dormancy class. Chemical treatment with HNO3, KNO3 and H2O2 were not improved seed germination, significantly. Only 12% and 9 % of seeds germinated after exposure to wet heat at 45 and 50 ◦C, respectively. Only 5% of seeds germinated after dry storage at -20◦C. Nevertheless, 80% of seeds germinated when they were physically scarified just above the embryo, revealing their physiological dormancy. However, more feasible dormancy breaking treatment must be identified to assist propagation of this species. Since this is an endemic and high priority species for *in-situ* and *ex-situ* conservation, further studies must be conducted in seed germination and dormancy breaking treatments.

**Keywords**: Wild rice, Seed, Conservation, Dormancy, Germination