

Growth performance of Malaysian's spongrass, *Halophila ovalis* (R.Br.) Hooker f. under different substrate, salinity and light regime.

ABSTRACT

Halophila ovalis plants collected from the native environment (Lat. 04°54.473 N, Long. 115°22.299'E-Pantai Bangat, Lawas, Sarawak, Malaysia) were grown in aquarium culture system to assess: (i) the feasibility of using planting materials e.g. rhizomes with and devoid of leaves, (ii) the growth and development of the plants under non-native substrates, fine beach sand and coarse river sand, (iii) the sustain growth and development of the population, and (iv) the tolerance range of plants under the tested salinity and depth. These assessment were achieved by planting rhizomes with or devoid of leaves in the tested sub-strates in containers, maintained in artificial seawater of various salinity, with minimum aeration and exposed in shaded out- door natural condition. The artificial seawater permitted a standardization of the medium. By manipulating the placement of substrates in the container (and planting of rhizomes into individual container) then submerged at different depths into the aquarium facilitated observation, recording of data and transferring of plants from one test condition to another. The morpho- logical changes of the vegetative parts e.g. leaf, petiole dimensions and paired cross-veins numbers of *H. ovalis* in the created conditions were compared to those of *H. ovalis* from native environment.

Keyword: *Halophila ovalis*; Laboratory culture; Substrate; Tolerance; Salinity; Depth.