Growth performance and production of Limnocharis flava (L.) Buchenau for vegetable crop

ABSTRACT

Limnocharis flava (L.) Buchenau is a fast growing aquatic plant often associated with rice fields and drainage systems. When present in abundant, it is a serious weed, often competing for nutrients and space. In the region of Sarawak, Malaysia, plants are harvested from the wild and offered for sale in native markets as edible vegetable and consumed among local urban peoples. There has been no attempt to propagate the plants through cultivation. Hence, a study was conducted to evaluate the growth performance of L. flava toward water nutrient uptake and plant production. Limnocharis flava can be propagated from seeds or plantlets in created environment, e.g., in tank. Plants propagated from seeds showed higher increased in plant vegetative parameters, i.e., plants height, number of leaf, blade length and width, petiole diameter, and inflorescence compared to plants propagated from plantlets. Comparing growth performance of L. flava and culture water nutrients based on multivariate non-parametric procedure BV-STEP, increased in number of inflorescence from plant propagated from seeds was moderately correlated with NO3-, while increased in blade length in plants propagated from plantlets were related to a combination of nitrogen sources NO2-, NO3-and NH3-. Seven harvestings performed at two weeks interval after five weeks of transplanting showed the yield of L. flava shoots from seeds propagation was comparatively higher than those propagated from plantlets.

Keyword: Growth; Macroalgae; Production; Sea urchin aquaculture; Salmacis sphaeroides; Survival