

Preliminary selection of some ecotypes of *Cynodon dactylon* (L.) Pers. in Sabah, Malaysia, for turfgrass use

ABSTRACT

In this study, five ecotypes of Bermuda grass (hereafter referred to as Kudat, Sipitang, Tawau, Papar and Beaufort) were evaluated for turfgrass potential. In general trait assessment, the Tawau ecotype was found to be darker green, and had shorter leaf and internodes lengths, while the Beaufort ecotype had shorter shoot length, and the Sipitang ecotype had a higher shoot number. In salt treatment, the Beaufort ecotype (second, Sipitang ecotype) had higher shoot dry weight and lower tissue death. Sipitang ecotype (second, Beaufort ecotype) had higher shoot fresh weight. All ecotypes had similar clipping yield and root fresh weight. In mowing treatment, the Sipitang ecotype (second, Tawau and Papar ecotypes) had higher shoot number. All ecotypes had similar leaf width, root fresh weight and shoot dry weight. In fertilizer treatment, the Sipitang ecotype (second, Kudat ecotype) had higher clipping yield and shoot number. It also had (second, Beaufort ecotype) higher shoot fresh weight and shoot dry weight. All ecotypes had similar root fresh weight. Overall, the results suggested that the Sipitang ecotype is the best among the ecotypes, as it has high shoot number, good environmental stress tolerance and low fertilizer requirement. The Tawau and Beaufort ecotypes are other choices. The Sipitang ecotype, however, could not match the quality of Tifdwarf, a commercial turfgrass used in golf greens. Hence, the good traits of the ecotype indicate that it has other functions other than being used in golf greens. A further study is recommended to test the functional qualities of the Sipitang ecotype to narrow down the practical usage of this ecotype