The assessment of yielding potential in forage sorghum lines [1]

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Abstract

The objectives of this study were to evaluate the effects of forage sorghum agronomic characters on yield and the following ratoon croprotation. There were four forage sorghum lines introduced from Japan and two lines selected from HengChun Branch COA. LRI. as experimental materials. The results showed that the two selecting lines in traits of plant height, stem diameter, plant fresh weight, max leaf length and leaf/stem ratio in the early seedling stage (40 days), were higher than those of the four Japanese lines. Besides, both in 75 and 95 days, the traits of plant height, stem diameter, plant fresh weight, max leaf length and max leaf width of the selecting lines, were higher than those of the four Japanese lines. The two selecting lines on the growth potential fertility during the development and the yields were higher than those of introduced varieties in main production, first ratoon harvest, second ratoon harvest and total production. However, the leaf/stem ratio of four Japanese lines was significantly higher than that of the two selecting lines. The results showed that all forage sorghum lines were sensitive to day length and the selecting lines had higher production than other four Japanese lines. It is beneficial to select the high yielding lines from the assessment of seedling agronomic characters in early stage in the basis biomass production.

Key words: Forage sorghum, Agronomic character, Select, Yielding potential.

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