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The effect of plant density on growth and yield of Citronella cv. [*Cymbopogon nardus* (L) Rendle]

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This study was conducted at the Farmer's field at Katuwana in Hambantota district during the year 2003-2006 to investigate the different plant density levels of "Heen Pengiri" (*Cymbopogon nardus*) in relation to their growth and yield. Five different spacing levels 1′ × 1′, 1′ × 1 1/2′, 1 1/2′ × 1 1/2′, 1 1/2′ × 2′, and 2′ × 2′ with three suckers per a planting point were tested using Randomised Complete Block Design with three replicates. During the three year period, nine harvests were collected and recorded data were taken on plant height (cm), number of shoots per planting point, wet grass yield (kg/ha), oil percentage and oil yield (kg/ha).

According to the results on data of growth parameters and yield, wider spacing of 2′ × 2′ with three suckers per point gave significantly higher plant height (103.0 mm) followed by medium spacing level of 1 1/2′ × 1 1/2′ (100.60 cm) while wider spacing level of 2′ × 2′ also had significantly more number of shoots (60.0, 79.8 and 85.6) during the first three years, respectively. Due to a lesser number of planting points in a unit area, a low oil yield was recorded. Therefore, highest average oil yield (367.96 kg/ha/yr) was obtained by medium spacing level 1 1/2′ × 1 1/2′ followed by 1′ × 1 1/2′ (352.88 kg/ ha/ yr).

With regard to the overall performances of growth characters and yield, high leaf oil content can be obtained from medium level of spacing of 1 1/2′ × 1 1/2′ with three suckers in a point for "Heen pengiri".

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