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## Internode Characteristics of Sweet Sorghum (*Sorghum bicolor* (L.) Moench) during Dry and Rainy Seasons in Indonesia

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**Abstract:** We have studied establishment of cultivation technique of sweet sorghum for monosodium glutamate (MSG) production on dry land in Indonesia, where the supply of raw materials has become restrictive recently. Previously, we confirmed the feasibility of cultivation in this area during the rainy season. Meanwhile, cultivation during the dry season is also important because vast expanses of heretofore unirrigated fields have remained unused. The stem, which comprises internodes, is the main product of sweet sorghum used as a raw material by fermentation industries. This study analyzes differences in growth and yielding ability between dry and rainy seasons by comparing internode characteristics. A sweet sorghum cultivar – Wray – was cultivated in the rainy season from 1995 and in the dry season of 1996 in Madura Island of East Java, Indonesia. Stems of sweet sorghum cultivated during the dry season were shorter and lighter, with two fewer elongated internodes than those of plants raised during the rainy season. They accumulated sugar slower and to a lower peak, but they were inferred to be harvestable for a relatively long period during 30–60 days after anthesis. Through research of internode characteristics, the difference in stem length was inferred to result from differences in internode numbers (25%) and in individual internode length (75%). The difference in weight seemed to result mainly from the fewer elongated internodes. Further experiments must explore the cultivation period (sowing and ratoon crop), varieties, and planting density to establish a sweet-

sorghum cultivation technique that is suitable for the dry season.

**Keywords:** [Dry land](#), [Dry season](#), [Growth](#), [Indonesia](#), [Internode](#), [Monosodium glutamate](#), [Rainy season](#), [Sweet sorghum](#)



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