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Variation in Fruit Quality of Different Salak Genotypes (*Salacca zalacca* (Gaert.) Voss) from Indonesia

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Abstract

The salak plant has been described in an other paper (Responses of 4 Salak Genotypes (*Salacca zalacca* (GAERT.) VOSS)) to Different Growing Media). Salak fruit is called “snake fruit” due to the appearance of the fruit skin, which resembles to the structure and colour of a snake skin. It is a small drupe (about 5 cm in diameter) with an aromatic and sweet flavour.

In Indonesia, salak has been cultivated across the islands and used as a food source for a long time ago. Among about 22 cultivars of salak, “pondoh” is the most promising because of its superior quality. In order to enter the worldwide market, the knowledge about post-harvest quality of the fruit is a very important aspect.

The purpose of this study was to investigate the nutritional valuable compounds, e.g. dietary fibres (pectin, lignin, hemicellulose, cellulose) and carbohydrate fractions (fructose, glucose, sucrose) of 4 different salak cultivars, i.e. “Pondoh Super”, “Pondoh Hitam”, “Pondoh Manggala” and “Gading Jawa”. These compounds were related to quality attributes of the fruit and provide information on physiological and textural properties of salak.

Total dietary fibres (insoluble dietary fibre and pectin) of “Gading Jawa” was the highest (93.5 mg/g dry matter (DM)) followed by “Pondoh Super” (69.7 mg/g DM), “Pondoh Hitam” (63.3 mg/g DM) and “Pondoh Manggala” (63.3 mg/g DM), respectively. Salak Pondoh tended to contain more crude fibre and hemicellulose (which varied from 19.6 – 22 mg/g DM and 4.1 – 7.2 mg/g DM, respectively) than those of “Gading Jawa” (18.2 mg/g DM and 3.9 mg/g DM, respectively). No significant differences of pectin content were found among all 4 salak cultivars, except the water-soluble pectin fraction of salak pondoh (which varied from 12.8 – 15.8 mg/g DM) being higher compared with that of “Gading Jawa” (9.88 mg/g DM). On the other hand, total carbohydrate of “Pondoh Hitam” was the highest (734.83 mg/g DM) followed by “Pondoh Manggala” (719.51 mg/g DM), “Pondoh Super” (687.23 mg/g DM) and “Gading Jawa” (652.92 mg/g DM), respectively. The high values of the dietary fibres and carbohydrate fractions reflected not only the high nutritional value, but also the sensory and textural quality compounds which will be discussed in detail.