Discrimination between female and male salak {*Salacca zalacca* (Gaertner) Voss} by isozymes analysis and seedling morphology

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ABSTRACT

There are two types of salak palms, female and male plant. The form of these two sexes are unlikely to be distinguished from one to another, by using morphological marker. The differentiation between these types are very important, especially at the early stage of plant development, firstly in determination of the population in the field and secondly in the creation of proportion between the two types in a certain planting area. The research was held from August 2006 to September 2007. The young salak plants, 8-months old originated from a single seed per fruit (seed type 1), double seeds per fruit (seed type 2) and triple seeds per fruit (seed type 3) were used in the experimentation. The leaves of adult female and male salak at 20 years old were used as control. The result of the study showed that there was a band variation of the two enzymes tested. The female and male salak can be distinguished by the two enzymes as showed by the differences in banding pattern. Seed numbers per fruit correlated with sexes of the salak palm. One seed per fruit (seed type 1) produced a male plant; two seeds per fruit (seed type 2) produced male and female plant with a comparison of 1 : 1; three seeds per fruit (seed type 3) also produced male and female plant with the ratio of 1 : 2.