

## Respon Orang Utan (*Pongo Pygmaeus Wurmbeii*) terhadap Fluktuasi Ketersediaan Buah: Aktivitas Harian, Komposisi Pakan dan Keberadaan Keton dalam Urin

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### Abstrak

Orangutans are arboreal, semi solitary, and frugivor primates. They spend the majority of their time consuming fruits. The percentage of fruit consumption reaches 60–70 % of the total feeding time. The fluctuating fruit availability in the nature significantly impacts the orangutan's nutritional intake. When fruits are available in low amounts, orangutans will use their fat storage to produce energy. The final result of the fat metabolism is ketone bodies, which can be detected in the orangutan's urine.

Tuanan is a secondary forest that would be an interesting valuable site for comparative studies, to ensure whether a certain type of habitat impacts the orangutan's behavior and its necessity for food. The objectives of this research were (1) to observe the orangutan's daily activity, food proportion, as well as the presence of ketone bodies in the orangutan's urine, and (2) to ensure whether fruit availability affects those values.

Data were collected from the following 12 orangutans (5 nonreproductive females, 1 reproductive female, 3 flanged males and 3 unflanged males) using instantaneous focal animal sampling method. The proportion of time spent in feeding, resting, moving, nesting, and social activity were 61,20%, 27,08%, 10,30%, 1,24% and 0,18%, respectively.

Significant difference was obtained only in moving activity. Social activity has significant correlation with fruit availability.

From this research, food proportion consisted of fruits (50,94%), leaves (27,24%), vegetative (9,87%), flowers (5,42%), cambium (3,65%), insects (2,80%), and others (0,08%). There was different proportion in flower intake based on gender and social class. Proportion of fruit consumption in orangutans was significantly correlated with fruit availability.

From 116 orangutans' urine samples, ketone bodies were only found in non-reproductive females. The female had just given birth to her first offspring. There was no significant correlation between the presence of ketone bodies in orangutans with fruit availability.