

PRODUKSI SUSU KAMBING PERANAKAN AFRICAN DWARF DAN PERANAKAN ETTAWA SERTA KORELASI PROFIL AMBING DENGAN PRODUKSI SUSU

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INTISARI

Penelitian ini bertujuan untuk mengetahui produksi susu kambing Peranakan African Dwarf dan Peranakan Ettawa serta korelasi profil ambing dengan produksi susu Kambing Peranakan African Dwarf dan Peranakan Ettawa. Penelitian ini dilaksanakan di Garage Farm, Yogyakarta pada Agustus 2022 hingga Februari 2023. Materi yang digunakan dalam penelitian ini adalah 9 ekor induk kambing Peranakan African Dwarf dan 9 ekor kambing Peranakan Ettawa pada laktasi kedua dan periode *mid lactation*. Profil ambing yang diamati meliputi bentuk ambing, lingkaran ambing, panjang puting, dan volume ambing. Koleksi data produksi dilakukan selama satu bulan. Perbandingan produksi susu dan ukuran profil ambing dianalisis menggunakan metode *independent sample T-test*. Korelasi profil ambing terhadap produksi susu dianalisis menggunakan metode korelasi regresi. Hasil penelitian menunjukkan produksi susu harian kambing PAD sejumlah $447,31 \pm 250$ ml, sedangkan kambing PE $957,73 \pm 174$ ml. Hasil uji *independent sample T-test* produksi susu kambing PAD dan PE mengalami perbedaan nyata ($P < 0,05$) dimana produksi harian kambing PE lebih tinggi dibandingkan kambing PAD. Kambing PAD memiliki bentuk ambing globular sedangkan kambing PE memiliki bentuk ambing botol. Profil ambing pada kambing PAD dan PE yang meliputi volume ambing, lingkaran ambing dan panjang puting memiliki korelasi positif terhadap produksi susu dengan nilai $P < 0,05$. Volume ambing memiliki nilai koefisien korelasi 0,94 untuk kambing PAD dan 0,90 untuk kambing PE. Nilai koefisien determinasi (R^2) sebesar 0,886 untuk kambing PAD dan 0,805 untuk kambing PE. Lingkaran ambing memiliki nilai korelasi 0,90 untuk kambing PAD dan 0,91 untuk kambing PE. Nilai koefisien determinasi (R^2) 0,816 pada kambing PAD dan 0,821 pada kambing PE. Panjang puting memiliki korelasi dengan produksi susu dengan nilai korelasi 0,84 pada kambing PAD dan 0,87 pada kambing PE. Nilai koefisien determinasi (R^2) 0,651 pada kambing PAD dan 0,758 pada kambing PE.

Kata kunci : Produksi susu, Profil ambing, Peranakan African Dwarf, Peranakan Ettawa.

MILK PRODUCTION OF AFRICAN DWARF AND ETTAWA CROSSBRED GOATS AND THE CORRELATION BETWEEN UDDER PROFILE AND MILK PRODUCTION

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ABSTRACT

This study aimed to determine the milk production of African Dwarf and Ettawa crossbred goats and the correlation between udder profile and milk production in African Dwarf and Ettawa goats. The research was conducted at Garage Farm, Yogyakarta, since August 2022 until February 2023. The materials used in this study were 9 African Dwarf crossbred goats and 9 Ettawa crossbred goats in their second lactation and mid-lactation period. The observed udder profiles included udder shape, udder circumference, teat length, and udder volume. Data collection for milk production was carried out for one month. A comparison of milk production and udder profile measurements was analyzed using the independent sample T-test method. The correlation between udder profile and milk production was analyzed using the regression correlation method. The results showed that the daily milk production of African Dwarf goats was 447.31 ± 250 ml, while for Ettawa goats it was 957.73 ± 174 ml. The independent sample T-test showed a significant difference ($P < 0.05$) in milk production between African Dwarf and Ettawa goats, with Ettawa goats having a higher daily milk production compared to African Dwarf goats. African Dwarf goats had a globular udder shape, while Ettawa goats had a bottle-shaped udder. Udder profiles in African Dwarf and Ettawa goats, including udder volume, udder circumference, and teat length, showed a positive correlation with milk production with a P-value of less than 0.05. The udder volume had a correlation coefficient of 0.94 for African Dwarf goats and 0.90 for Ettawa goats. The coefficient of determination (R^2) was 0.886 for African Dwarf goats and 0.805 for Ettawa goats. Udder circumference had a correlation coefficient of 0.90 for African Dwarf goats and 0.91 for Ettawa goats. The coefficient of determination (R^2) was 0.816 for African Dwarf goats and 0.821 for Ettawa goats. Teat length showed a correlation with milk production, with a correlation coefficient of 0.84 for African Dwarf goats and 0.87 for Ettawa goats. The coefficient of determination (R^2) was 0.651 for African Dwarf goats and 0.758 for Ettawa goats.

Keywords: Milk production, Udder profile, African dwarf crossbred, Ettawa crossbred.