

PENGARUH SUPLEMENTASI DAUN LAMTORO (*Leucaena leucocephala*)
TERHADAP KECERNAAN NUTRIEN DAN
PENAMPILAN PRODUKSI SUSU SAPI PERAH
PERANAKAN FRIESIAN HOLSTEIN

INTISARI

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Penelitian ini dilakukan untuk mengetahui pengaruh suplementasi daun lamtoro (*Leucaena leucocephala*) dalam ransum sapi Peranakan Friesian Holstein terhadap pencernaan pakan, produksi, dan komposisi susu. Percobaan dilakukan dengan menggunakan 3 perlakuan, yaitu P0, P1, dan P2 dengan 4 ulangan. P0 adalah ransum basal, terdiri dari 60% konsentrat + 40% hijauan dari total bahan kering, sedangkan P1 dan P2 berisi ransum basal ditambah daun (*Leucaena leucocephala*) sebanyak 10% dan 20% dari total bahan kering hijauan. Percobaan dilakukan selama 60 hari, dengan 12 sapi laktasi dengan berat 400 - 450 kg, fase laktasi 3-4 bulan. Data tentang bahan kering, pencernaan bahan organik, dan konsumsi nutrisi dikumpulkan selama 7 hari. Parameter yang diamati adalah produksi susu, komposisi susu yaitu persentase protein, lemak, laktosa, *solid non fat*, berat jenis. Konsumsi dan pencernaan bahan pakan yang meliputi bahan kering, bahan organik, serat kasar dan protein kasar. Hasil menunjukkan bahwa suplementasi daun *Leucaena leucocephala* signifikan (**$P < 0,05$**) **diantara kontrol dengan perlakuan, suplementasi daun lamtoro** pada level 10% dapat meningkatkan konsumsi serat kasar (P0 : $2,13 \pm 0,10$ kg, P1 : $2,54 \pm 0,23$ kg, P2 : $2,84 \pm 0,29$ kg), kandungan protein susu (P0 : $3,21\% \pm 0,42$, P1 : $2,96\% \pm 0,1$, P2 : $3,05\% \pm 0,16$), lemak susu (P0 : $4,73 \pm 0,45\%$, P1 : $4,86 \pm 0,82\%$, P2 : $4,91 \pm 0,92\%$) dan laktosa susu (P0 : $4,55\% \pm 0,22$, P1 : $4,9\% \pm 0,08$, P2 : $4,35\% \pm 0,67$), sedangkan pada level 20% dapat meningkatkan konsumsi BK (P0: $10,19 \pm 0,59$ kg, P1: $11,39 \pm 1,00$ kg, P2 : $12,40 \pm 1,08$ kg), konsumsi BO (P0 : $9,38 \pm 0,79$ kg, P1 : $9,55 \pm 0,87$ kg, P2 : $9,79 \pm 1,25$ kg), konsumsi PK (P0 : $1,07 \pm 1,10$ kg, P1 : $1,35 \pm 1,17$ kg, P2 : $1,33 \pm 0,23$ kg), konsumsi TDN (P0 : $6,38 \pm 0,30$, P1 : $6,66 \pm 0,72$, P2 : $7,32 \pm 0,19$), pencernaan BK (P0: $65,51 \pm 1,69\%$, P1: $66,52 \pm 0,73\%$, P2: $69,86 \pm 5,57\%$), pencernaan BO (P0: $62,88 \pm 1,75\%$, P1: $65,46 \pm 4,33\%$, P2: $69,67 \pm 2,69\%$), pencernaan PK (P0: $72,99 \pm 1,25\%$, P1: $75,61 \pm 2,03\%$, P2: $78,54 \pm 2,84\%$), dan produksi susu (P0 : $10,15 \pm 0,19$ L, P1 : $10,32 \pm 0,24$ L, P2 : $11,70 \pm 2,29$ L). Disimpulkan bahwa dengan penambahan 10% suplementasi daun lamtoro sudah dapat meningkatkan komposisi susu dan memerlukan 20% suplementasi daun lamtoro untuk meningkatkan konsumsi, pencernaan pakan dan produksi susu.

Kata kunci : Daun Lamtoro, Produksi susu, Komposisi susu, Pencernaan Nutrien, Suplementasi.

THE EFFECT OF SUPPLEMENTATION OF (*Leucaena Leucocephala*) LEAF IN FRIESIAN HOLSTEIN COWS RATION ON MILK PRODUCTION, COMPOSITION AND DIGESTIBILITY OF DRY MATTER AND ORGANIC MATTER IN FRIESIAN HOLSTEIN DAIRY COWS

ABSTRACT

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This study aims to investigate effect of supplementation of *Leucaena leucocephala* leaf in the of Friesian Holstein cow on milk production, digestibility of dry matter and organic matter. The experiment was designed followed completely randomized design, consisted of 3 treatments, namely P0, P1 and P2 with 4 replications. P0 (basal ration, composed of 60% concentrates + 40% forage of total dry matter), while P1 and P2 contained basal ration and *Leucaena leucocephala* leaf, supplemented with level of 10% and 20% of total forage dry matter, respectively. The experiment was performed for 60 days, with 12 lactation cows at body weight 400 - 450 kg. Cows were at 3 to 4 months of lactation stage. The data on dry matter, organic matter digestibility and nutrient consumption were collected during 7 days. The parameters observed were milk production and milk composition, namely the percentage of protein, fat, lactose, *solid non fat*, density, nutrients consumption and digestibility of dry matter, organic matter. The results showed that *Leucaena leucocephala* leaf supplementation was significant ($P < 0.05$) between control and regulation, supplementation of lamtoro leaves at the 10% level could increase consumption of crude fiber (P0: 2.13 ± 0.10 kg, P1: 2.54 ± 0.23 kg, P2: 2.84 ± 0.29 kg), protein content (P0: $3.21\% \pm 0.42$, P1: $2.96\% \pm 0.1$, P2: $3.05\% \pm 0.16$), fat (P0: $4.73 \pm 0.45\%$, P1: $4.86 \pm 0.82\%$, P2: $4.91 \pm 0.92\%$) and milk lactose (P0: $4.55\% \pm 0.22$, P2: $4.9\% \pm 0.08$) and P2: $4.35\% \pm 0.67$), while at the level of 20% can increase the consumption of BK (P0: 10.19 ± 0.59 kg, P1: 11.39 ± 1.00 kg, P2: 12.40 ± 1.08 kg), BO (P0: 9.38 ± 0.79 kg, P1: 9.55 ± 0.87 kg, P2: 9.79 ± 1.25 kg), PK (P0: 1.07 ± 1.10 kg, P1: 1.35 ± 1.17 kg, P2: 1.33 ± 0.23 kg), TDN (P0: 6.38 ± 0.30 , P1: 6.66 ± 0.72 , P2: 7.32 ± 0.19), BK digestibility (P0: $65.51 \pm 1.69\%$, P1: $66.52 \pm 0.73\%$, P2: $69.86 \pm 5.57\%$), BO (P0: $62.88 \pm 1.75\%$, P1: $65.46 \pm 4.33\%$, P2: $69.67 \pm 2.69\%$), PK (P0: $72.99 \pm 1.25\%$, P1: $75.61 \pm 2.03\%$, P2: $78.54 \pm 2.84\%$), and milk production (P0: 10.15 ± 0.19 L, P1: 10.32 ± 0.24 L, P2: 11.70 ± 2.29 L). It was concluded that supplementation of *Leucaena leucocephala* leaves at the 10% level can increase milk composition while at the require 20% level can increase consumption, feed digestibility and milk production.

Keywords: Lamtoro leaf, milk production, milk composition, nutrient digestibility, supplementation.