

**RESPON KONSUMSI NUTRIEN SAPI PERAH LAKTASI  
DAN NILAI *TEMPERATURE HUMIDITY INDEX* PADA  
MUSIM KEMARAU DI KELOMPOK TERNAK  
NGUDI MAKMUR II, CANGKRINGAN,  
SLEMAN, YOGYAKARTA**

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**INTISARI**

Penelitian ini bertujuan untuk mengidentifikasi dan menganalisis respon konsumsi nutrisi sapi perah laktasi serta hubungan *temperature humidity index* (THI) terhadap konsumsi bahan kering (BK) pada musim kemarau di kelompok ternak Ngudi Makmur II, Cangkringan, Sleman, Yogyakarta. Penelitian ini dilaksanakan pada bulan September 2019 sampai November 2019. Penelitian ini menggunakan 10 ekor sapi perah *Friesian Holstein* (FH) periode *mid* laktasi. Pakan yang diberikan adalah hijauan dan konsentrat dengan proporsi sesuai yang biasa diberikan oleh peternak di kelompok ternak Ngudi Makmur II. Air minum diberikan secara *ad libitum*. Variabel yang diamati adalah komposisi nutrisi bahan pakan, konsumsi nutrisi (bahan kering (BK), bahan organik (BO), protein kasar (PK), lemak kasar (LK), serat kasar (SK), dan *total digestible nutrients* (TDN)), pengukuran temperatur dan kelembaban, serta perhitungan nilai THI. Analisis sampel dilaksanakan di Laboratorium Ilmu Ternak Perah dan Industri Persusuan, Fakultas Peternakan, Universitas Gadjah Mada, Yogyakarta. Data konsumsi nutrisi dan nilai THI dianalisis dengan metode analisis deskriptif. Selanjutnya data konsumsi BK dengan nilai THI dianalisis lanjut dengan korelasi dan regresi. Hasil penelitian menunjukkan konsumsi BK  $14,39 \pm 2,56$  kg BK/ekor/hari, BO  $12,27 \pm 2,26$  kg BK/ekor/hari, PK  $1,73 \pm 0,27$  kg BK/ekor/hari, SK  $2,90 \pm 1,00$  kg BK/ekor/hari, dan TDN  $9,09 \pm 1,52$  kg BK/ekor/hari. Data rata-rata temperatur, kelembaban udara, dan nilai THI setiap harinya berturut-turut  $26,27 \pm 0,69^\circ\text{C}$ ,  $87,94 \pm 3,54\%$  dan  $76,00 \pm 3,12$ . Nilai THI mempunyai korelasi negatif terhadap konsumsi BK dengan derajat hubungan korelasi lemah. Kesimpulan dari penelitian ini adalah sapi FH pada musim kemarau di Kelompok Ternak Ngudi Makmur II, Cangkringan memiliki nilai THI yang menyebabkan *heat stress* ringan pada sapi perah, meskipun begitu konsumsi BK pakan ternak telah tercukupi kebutuhannya.

Kata kunci: Konsumsi nutrisi, Musim kemarau, Sapi perah laktasi, *Temperature humidity index*.

**RESPONSE TO NUTRIENT INTAKE OF LACTATING DAIRY COWS  
AND THE VALUE OF THE TEMPERATURE HUMIDITY  
INDEX IN NGUDI MAKMUR II DAIRY FARMERS GROUP,  
CANGKRINGAN, SLEMAN, YOGYAKARTA,  
DURING DRY SEASON**

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**ABSTRACT**

This study aims to identify and analyze the response to nutrient intake of lactating dairy cows and the relationship between *temperature humidity index* (THI) and consumption of dry matter (DM) in Ngudi Makmur II dairy farmers group, Cangkringan, Sleman, Yogyakarta, during dry season. The study was conducted in September until November 2019. This study used 10 Holstein Friesian dairy cows in the mid-lactation period, which was fed with forages and concentrates in the usual of the farmers feeding. Water provided by ad libitum. The variables measured were analysis of the composition of feed ingredients, feed intake ((dry matter (DM), organic matter (OM), crude protein (CP), extract ether (EE), crude fiber (CF) and total digetible nutrients (TDN)), measuring temperature and humidity, and calculating the THI value. The sample were analyzed in the Laboratory of Dairy Science and Milk Industry, Faculty of Animal Science of Universitas Gadjah Mada, Yogyakarta. The feed consumption, and THI value data obtained from this study were being analyzed descriptively. Then, the data of DM intake with the THI value were analyzed by regression and correlation. The results of the study showed that DM  $14.39 \pm 2.56$  kg DM/head/day, BO  $12.27 \pm 2.26$  kg DM/head/day, CP  $1.73 \pm 0.27$  kg DM/head/day, CF  $2.90 \pm 1.00$  kg DM/head/day and TDN  $9.09 \pm 1.52$  kg DM/head/day. The average data of temperature, humidity, and THI value every day were  $26.27 \pm 0.69$  ° C,  $87.94 \pm 3.54\%$  and  $76.00 \pm 3.12$ . The THI value has negative correlation to DM consumption with low degree of correlation. From this research, we can conclude that the THI value of Holstein Friesian cattle in Ngudi Makmur II caused lowheat stress in dairy cattle but nutrient consumption was fulfilled.

(Key words: dry season, lactating dairy cattle, nutrient intake, temperature humidity index.)