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THI and milk production of Friesian Holstein cows raised at different altitudes

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Abstract

Temperature Humidity Index (THI) is an indicator how convenience an animal live in a given environment. The more comfortable animals live the more productive the animals would be. Productivity of an animal could be expressed as production performances. This research was intended to know the effect of different altitudes causing different THI and milk production of Friesian Holstein cows. Locations of research were in lowland area of Grati Village (100 m above sea level) and Nongkojajar Village (400-2000 m above sea level), both in the Pasuruan District. The materials used in each location were 45 Friesian Holstein cows. The cows were divided into 3 groups of parity 2,3 and 4, and they were further divided into 3 groups of lactation month 2, 3 and 4. Each lactation group consisted of 5 cows. The data were purposively sampled by conducting survey. The data of temperature, humidity, and milk production of each parity or each month of lactation were collected based on recording owned by farmers and or each cooperative.

The results indicated that lowland area showed higher temperature but lower in humidity and THI. Highland area showed a significantly higher milk production, and increasing month of lactation showed a significantly decrease in milk production. On the other hand, parity did not show a significant response toward milk production. This result indicated that the highland area is more preferable to raise Friesian Holstein cows in tropical country like Indonesia due to more comfortable based on THI result.

Keywords: THI, milk production, Friesian Holstein cows, altitude

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