

Mortality Rate of Bali Cattle (*Bos sondaicus*) Calves in West Timor, Indonesia

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High calf mortality has been reported to be the most prominent factor responsible for the low productivity of Bali cattle productivity in West Timor, Indonesia. Some studies recorded calf mortality in the range between 30% to 40% (Wirdahayati and Bamualim 1994), or as high as 50% in some herds (Fattah, 1998).

A survey was carried out to investigate the mortality rate of Bali cattle calves in 4 districts in West Timor, Indonesia Timor, including the districts of Kupang, Timor Tengah Selatan (TTS), Timor Tengah Utara (TTU) and Belu. Data on the incidence and causes of calf mortality were collected from a total of 249 farmers during December 2007 using structured interviews based on a standard questionnaire. Data were statistically analysed using Proc. GLM (SAS Institute).

Calf mortality varied significantly from 11.06% in TTU to 23.27% in Belu (Table 1). The overall average calf mortality rate was 17.9%, significantly below the calf mortality rate of 35% reported by Jelantik (2001). The differences in reported calf mortality could be due to a season effect or regional variation. Calf mortality varied from 7.6% in the sub-district of Miommafo Timur (in TTU) to 40% in the sub-district of Kupang Timur (Kupang District), but reached as high as 60% in some villages. 86% of the annual calf mortality occurred at the end of the dry season and beginning of rainy season (from October to December). According to farmers, the dominant factors causing calf death were diseases (53.7%), lack of milk (44.4%) and accidents (1.85%).

Table 1. Mortality rate of Bali calves in different Districts in West Timor, Indonesia

District	Sub district range of mortality	Average District Mortality Rate (%)
Kupang	12.6% to 40.5%	21.96
Timor Tengah Selatan (TTS)	7.6% to 16.7%	13.22
Timor Tengah Utara (TTU)	7.6% to 35.1%	11.06
Belu	9.8% to 35.1%	23.27
Overall average		17.90
Probability		0.0062

These results are based on the opinions of farmers, who may be reluctant to admit calves have died from lack of milk or starvation as suggested by the work of Jelantik (2001). Anecdotal evidence also suggests that the highest calf mortality occurs in the remote areas, which may not have been sampled.

However, a calf mortality of even 18% represents a considerable biological loss. It should be possible to reduce calf mortality to between 5% and 10% with minimal intervention (Jelantik et al 2008), resulting in a considerable improvement in overall productivity of the cattle industry of West Timor, Indonesia.

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