Reproductive performance of Ongole cows in Indonesian villages

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Introduction

Increasing beef cattle production by smallholder farmers in Indonesia requires an increase in the reproductive performance of cows and more efficient utilisation of existing feed resources such as rice straw and other agricultural by-products. The aim of the Straw Cow Project is to establish a cow-calf system based on rice straw, with strategic supplementation to the cow during periods of high energy demand. The Straw Cow Project will run for 4 years in Indonesia. This paper presents some preliminary results from the first year of the project.

Methods

Two village sites (Probolinggo and Malang) were established in East Java, Indonesia, in January 2010. Across the two sites, 250 Peranakan Ongole cows (*Bos indicus*) were identified and enrolled in the project. Farmers were encouraged to feed the cows a basal diet of rice straw *ad libitum* plus an energy and protein supplement in the form of tree legumes or agricultural by-products (e.g. rice bran). Dates of mating, calving and weaning were recorded. Data was analysed using ANOVA in SPSS.

Results

Length of lactation, post partum anoestrus and estimated calving interval were shorter in Probolinggo compared to Malang (Table 1). Average body condition score (BCS) of cows at calving was lowest in Probolinggo, with 63% of cows in BCS less than 3 at calving. Only 21% of cows in Malang were in BCS less than 3 at calving. Average weight of cows after calving was 306 and 325 kg in Probolinggo and Malang respectively.

Table 1. Reproductive performance of Ongole cows (average, range).

Parameters	Probolinggo		Malang		P value
BCS at calving (1-5 scale)	2.7	(2 - 3.5)	3.1	(2 – 5)	< 0.05
Length of lactation (days)	110	(23 – 165)	166	(21 – 217)	< 0.05
Post partum anoestrus (days)	81	(41 – 198)	132	(41 – 264)	< 0.05
Estimated calving interval (days)	380	(314 – 447)	464	(351 – 558)	< 0.05

Conclusions

Although reproduction was higher at Probolinggo than Malang, there is room for improvement at both sites. Minimum post partum anoestrus was 41 days at both sites, indicating opportunities to achieve higher reproduction rates. Low BCS of cows at calving, particularly in Probolinggo, is likely to delay return to oestrus. Oestrus detection, access to bulls and AI, and timing of mating are issues at both sites which impact on reproduction rates and will be targeted by Indonesian extension workers during the second year of the project.

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