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## Effect of Calf Starter Supplementation on Mortality Rate and Performance of Bali Calves

HENDERIANA BELLI, I GUSTI NGURAH JELANTIK

*University of Nusa Cendana, Department of Animal Production, Indonesia*

### Abstract

Two onfarm experiments were conducted for two consecutive years to reduce calf mortality and to improve the productive performance of Bali calves in the propince by supplementation of calf starter during dry season. Eightteen Bali cow-calf pairs were randomly allotted during the first year to receive three treatments of six replication with balanced sex of calves. The treatments were : calves were grazing natural pasture with their dam as control group (C), calves were separated while cows grazing and given ad libitum access to high quality and leucaena leaf (CG), and calves were separated while cows grazing and given ad libitum access to high quality grass hay and leucaena leaf and supplemented with 0,5 kg calf starter (CGS). Calf starter was formulated using locally available feeds consisting of pumpkin, refused corn meal, coconut cake and snail meal to contain 16 % crude protein (CP) and 11 MJ ME/kg dry matter. In the 2nd year, twenty four Bali cow-calf pairs were involved and the calf starter was offered to six calves in each rearing systems, i.e. dams were thertered during the day (CGSt) or dams were grazing natural pasture (CGSg). Paramaters measured were calf mortality rate and live weight gain (LWG). Results showed that supplementation of calf starter significantly reduced ( $p < 0.05$ ) calf mortality from 33,3% in control group (C) to 0% in supplemented groups (CG and CGS) in the first year. Calf mortality was also absent in both CGSt and CGSg, while 50 % calves in control group (C) were died during the second year. Supplementation of calf starter significantly increased live weight gain of Bali calves from 133  $\text{gd}^{-1}$  in C to 379  $\text{gd}^{-1}$  in CGS during the first year. LWG of Bali calves were also significantly ( $p = 0.006$ ) improved in the second year from 35.7  $\text{gd}^{-1}$  in C to 152  $\text{gd}^{-1}$  and 279  $\text{gd}^{-1}$  respectively in CGSt and CGSg. Thus, the result of the research strongly indicates that supplementation of calf starter formulated from locally available feeds is an effective strategy to reduce calf mortality and to improve the productive performance of Bali calves.

**Keywords:** Bali calves, calf starter, mortality rate, supplementation, weight gain