**The presence of maternal immunity level against lumpy skin disease in dairy calves born from vaccinated cows**

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**Abstract**

The objective of this study aimed to determine the presence of maternal immunity level against lumpy skin disease virus (LSDV) in dairy calves born from vaccinated cows. The study was conducted in dairy farms in Chiang Mai province. Fifteen pregnant cows that vaccinated with a live-attenuated LSDV Neethling vaccine were enrolled in the study. Dairy cow sera were collected from the cows on Day 0 (calving date). After feeding with colostrum, serum samples were collected from the dairy calves on Day 7, Day 30, Day 60, Day 90 and Day 120. The sera were tested for the presence of protective immunity against the LSDV using virus neutralization test. The antibody titer 1:2 or higher was considered to be positive against LSDV. All of the cows were detected the protective antibodies at calving date. The neutralizing antibody titers of the calves were discovered on Day 7, Day 30, Day 60, Day 90 and Day 120 at 100% (15/15), 80% (12/15), 60% (9/15), 40% (6/15) and 20% (3/15), respectively. The results show calves with high antibody titers against LSDV were detected until Day 60 and rapidly decreased on Day 90. This finding suggests that the calves born from LSDV vaccinated cows should be given a live-attenuated LSDV Neethling vaccine at 3 months of age.

**Keywords:** Lumpy skin disease, Maternal immunity, Virus neutralization test, LSDV vaccine