

## THE STUDY OF FACTORS AFFECTING ON THE PREGNANCY WITHIN 120 DAYS POSTPARTUM IN HOLSTEIN FRIESIAN CROSS BRED DAIRY COWS USING COX'S REGRESSION

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**ABSTRACT** The aim of this study was to examine the relationship between factors and pregnancy outcome within 120 days postpartum in Holstein Friesian cross-bred dairy cows in small holder farms. Data consisted of pregnancy results within 120 days postpartum from 3,234 dairy cows from 591 dairy farms collected by Chiang Mai Artificial Insemination Research and Biotechnology Center. Factors were percentage of cross breed, parity and season of calving. Cox's regression analysis (PROC PHREG, SAS 9.0) was performed to test the association between pregnancy outcome and interesting factors. The result showed that the proportion of pregnancy for cows in 87.5%HF breed group was not different from cows in 75-87.5%HF breed group (hazard ratio = 1.01;  $p > 0.05$ ). Cows in parity 3 or more were more likely in pregnant than first parity cows (hazard ratio = 1.17;  $p < 0.05$ ). Cows calving during hot season had a higher risk for pregnancy failure during 120 days postpartum compared with cows calving during winter season (hazard ratio = 0.66;  $p < 0.0001$ ). This study indicated that first lactation cows and cows calving during hot season had a low reproductive performance. *Chiang Mai Veterinary Journal* 2006;4(1):3-10.

**Keywords:** dairy cows, pregnancy, factors, Cox' regression

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