

**DETECTION OF BLOOD UREA NITROGEN (BUN) AND
ESTROGEN LEVEL ON DAIRY COWS WITH DIFFERENT
LEVELS OF PRODUCTION AND SERVICES PER
CONCEPTION (S/C)**

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ABSTRACT

This study was conducted to detect BUN and estrogen levels based on milk production and services per conception (S/C), and to evaluate estrogen concentrations based on BUN and pregnancy on dairy cows. Blood sampling for estrogen measurements was performed three times at the day of AI (H0), seven days after AI (H+7) and 22 days after AI (H+22). A total of 18 dairy cows were randomly selected from the total population and grouped according to S/C, milk yield and then regrouping was done based on BUN and pregnancy. The lowest mean of BUN was found in groups with high milk production and S/C, but not significantly different ($P > 0.05$). The estrogen level and CR based on milk production and S/C were not significantly different ($P > 0.05$) in each group. The estrogen level based on BUN and pregnancy on H0 and H+7 were not significantly different ($P > 0.05$) in each group, with a lower in the group of non-pregnant cows with high BUN. While in H+22, the concentration of estrogen in the group of pregnant cows with low BUN and in the group of non-pregnant cows with high BUN were lower than those of the group of non-pregnant cows with low BUN ($P < 0.05$), and in H+22, the group of non-pregnant cows with high BUN showed a lower estrogen than the group of pregnant cows with low BUN ($P > 0.05$). These findings suggested that S/C and milk yield did not affect BUN levels. These results indicated that increased BUN concentration reduced pregnancy, with concentrations of BUN ≥ 18 mg/dL resulted in lower estrogen concentrations on H+22 estrus cycle.

Key words: BUN, estrogen, milk production, services per conception