

## EFFECT OF ORIGINAL COMBINATION OF BUTAFOSFAN AND VITAMIN B12 AND GENERICS FROM ASIA ON REPRODUCTION PARAMETERS IN CATTLE

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**Introduction:** The positive effect of injectable butafosfan and vitamin B12 combination (**Catosal**<sup>®</sup>, Bayer Animal Health) on subclinical ketosis and secondary ketosis associated to abomasal displacement was already reported (Fürl et al. 2007, Sarasola et al. 2008, Cuteri et al. 2008). Furthermore, the beneficial effect of the combination in terms of reproduction was also reported (Flasshoff, 1974, Palmer 1979).

**Objective:** The aim of the present study was to compare the effects of original Catosal<sup>®</sup> and generics from Asia on the reproduction parameters in postpartum cattle with elevated blood BHBA (*beta*-Hydroxybutyric acid) levels.

**Material and method:** Nine to 10 cattle postpartum in around second week with blood BHBA of 0,95 - 4 mmol/L were allocated randomly into each group of total five groups (control, Catosal<sup>®</sup>, generic 1, 2, 3). After diagnosis of elevated blood BHBA with the site-use device Precision Xceed (Iwersen et al. 2009) around second week postpartum, each of the cattle in the treatment groups received 5 ml/100 kg of the combination butafosfan and vitamin B12 for 4 consecutive days intramuscularly. Cattle in the control group received saline 5 ml/100 kg as stated above. Cattle in the Catosal<sup>®</sup> group had constantly lower blood BHBA and on 21 day after first injection medium significantly ( $p < 0,09$ ) lower blood BHBA compared to control group. All other generics did not differ from control group significantly ( $p > 0,1$ ). Number of days between calving and last artificial insemination, conception rate and number of artificial inseminations were significantly long ( $> 190$  days), low (44%) and high ( $n=4,9$ ) in generic 3 ( $p < 0,05$ ) compared to Catosal<sup>®</sup> group (113 days, 89%,  $n=2,2$ ) respectively. Conception rate of Catosal<sup>®</sup> group was also significantly ( $p < 0,05$ ) higher than control group (40%). Number of days between calving and last artificial insemination (188 days) and number of artificial inseminations ( $n=5$ ) of control group were medium significantly ( $p < 0,07$  and  $p < 0,09$ ) higher than Catosal<sup>®</sup> group. All other generics did not differ from control group regarding these reproduction parameters significantly.

**Conclusion:** Catosal<sup>®</sup> as original butafosfan and vitamin B12 injectable formulation showed better efficacy in terms of controlling subclinical ketosis and improving the reproduction parameters in cattle compared to control group and generics.