

PREGNANCY LOSSES IN BOVINE SINGLETON AND TWIN PREGNANCIES

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Twin pregnancy in dairy cattle is affecting reproductive performance as an unwanted phenomenon. In practice, pregnancy loss due to embryonic/fetal mortality is the main factor affecting the results of pregnancy diagnoses; therefore the nature of the phenomenon must be taken into consideration when evaluating any diagnostic method.

In total, 1253 positive pregnancy diagnoses on three farms [farm A: n=304 (24.3 %), farm B: n=674 (53.8%) and farm C: n=275 (21.9 %)] were made between days 29 to 42 of gestation and followed up until calving. The prevalence of twin gestations diagnosed between days 29 to 35 (73/866, 8.4 %) and days 36 to 42 (32/387, 8.3 %) were similar. There were one CL in 957 (83.4 %) and two CLs in 191 (16.6 %) singleton pregnancies, respectively.

In twin-carriers only one CL was found in three cases (2.9 %), and all other twin cows had two (n=99) or three CLs (n=3). Cavitory CL occurred in one twin-carrier (1.0 %) and in 58 singleton pregnancies (5.1 %).

The rate of pregnancy loss diagnosed between days 29–42 and 57–70 was altogether 4.6 % (53/1148) in singleton and 4.8 % (5/105) in twin pregnancies ($P=0.95$), respectively. Differences in pregnancy loss at drying-off were also not significant between singleton and twin pregnant animals ($P=0.99$). Based on logistic regression analysis, in any time points total losses were not different in singleton and twin pregnancies ($P=0.94$, OR=1.04 and $P=0.96$, OR=0.98, respectively), and we could not detect any farm effect ($P=0.36$, OR=0.83 and $P=0.08$, OR=0.79, respectively). Pregnancy loss was also evaluated on the basis of laterality in cases of singleton and twin pregnancies. In singleton gestations, the rate of right-side pregnancy losses (35/670; 5.2 %) did not differ significantly ($P>0.05$) from those of the left-side pregnancy losses (18/478; 3.8 %) between days 29–42 and 57–70, respectively. This difference was also not significant at drying-off pregnancy check ($P>0.05$). Based on logistic regression analysis in twin gestations neither the difference of the pregnancy losses at days 57–70 (4/57; 7 % vs. 1/48; 2.1 %), nor the differences at the time of drying off (4/57; 7 % vs. 2/48; 4.2 %) were significant ($P>0.05$) between unilateral and bilateral pregnancies.

When analysing the pregnancy losses of twin pregnancies in dairy cattle there was no differences between singleton- and twin-carrying cows at the confirmation of pregnancy between days 57–70 of gestation, moreover, at drying-off also a non-significant difference was detected between singleton and twin carrying groups. In singleton pregnancies, presence of a cavity in the *corpus luteum* effected pregnancy loss. Between days 57–70 of gestation and drying-off this difference between cavitory vs. non-cavitory CL was still significant, while it was non-significant between cows with one CL vs. double CLs.

Keywords: DAIRY CATTLE, TWIN PREGNANCY, SINGLETON PREGNANCY, CAVITARY CORPUS LUTEUM