Title: Reproductive performance of Holstein and Fleckvieh x Holstein heifers and cows in a total mixed ration feeding system

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The fertility in dairy herds is becoming a major issue as several studies indicate a decline in the reproductive performance of dairy cows. Crossbreeding is regarded as a way to overcome this. In this paper, preliminary results of the reproductive performance of Holstein (H) and Fleckvieh x Holstein (F x H) heifers and lactating cows are presented. Heifers and cows were in an on-going breed comparison study in a total mixed ration (TMR) feeding system. Reproductive traits were derived from interval traits between birth and artificial insemination (AI) dates for heifers and calving and AI dates for cows. Means ± sd for the interval from calving to first insemination (CFS) were 91 ± 31 and 85 ± 31 days (P = 0.10) for H and F x H cows respectively. The proportion of cows having a first insemination within 80 days post-partum (FS < 80d), and confirmed pregnant within 100 days post-partum (PD100d) for H and F x H cows was 0.41 and 0.51 (P = 0.09) and 0.29 and 0.45 (P = 0.01) respectively. Age at first service was lower and the proportion of heifers inseminated by 14 months of age was higher (P < 0.05) in F x H in comparison to H heifers. While crossbred heifers and cows showed improved absolute reproduction compared to purebred animals, differences between breeds were not significant in all instances. As reproduction management strongly affects the performance of dairy cows, a larger data set and possibly records from other herds might reduce variability in fertility traits.

Keywords: fertility, reproductive performance, TMR, heifers, dairy cows, Holstein, Fleckvieh, crossbred

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