Poster ID 6734

Factors affecting open days and calving intervals in a training Brown Swiss cattle farm

Zakizadeh, S [1]. Sabzali,A. Hasheminejad High Education Center, Animal Science Department, Kalantari Highway, 91769-94767, Mashhad, Iran; [1]sonia_zaki@yahoo.com

Introduction

- ✓ Reproductive performance affects productivity and profitability of every dairy herd
- ✓ Poor reproductive performance is the most important herd management problem
- ✓ Calving to first success insemination guarantees the probability that a calving event would arise because of a pregnancy occurring from first insemination
- ✓ Appropriate open days (OD) and calving interval (CI) could maximize reproduction performances and play a vital economical role to increase profit of dairy farms
- ✓ Environmental factors can reduce the reproductive performance of lactating dairy cows/hiefers

Materials and methods

- ✓ 700 records related to 260 cows were used
- ✓ Cows had all given birth during 1979-2009
- ✓ Two linear regression models were applied for open days and calving interval
- ✓ Model used for OD included previous milk production, days in milk (DIM), age at artificial insemination, year and month of insemination, and service numbers (SN)
- ✓ The effects of parity, OD, service numbers, year and season of calving were considered in the second model for CI
- ✓ Data analyzed by JMP software (V. 4.0.4)

Results

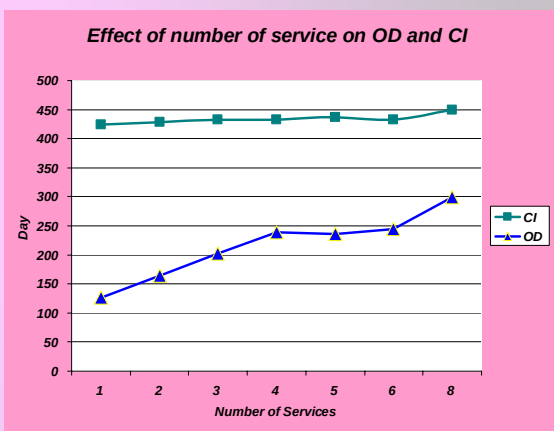
- ✓ Year of insemination, service number and days in milk had highly significant effect on OD
- ✓ Previous milk production had significant effect on the next OD
- ✓ Effect of age and month of insemination was not significant on OD
- ✓ There was negative correlation between milk production and OD
- ✓ OD was prolonged by increasing of days in milk and number of insemination
- ✓ Conception ration per insemination increased by age; the lowest rate was at the 3rd calving
- ✓ CI was significantly affected by OD, parity and increasing of SN
- ✓ Year of calving had significant effect on CI, but not the season of calving
- ✓ Parity had significant effect on CI, but did not show any specific trend
- ✓ It could be because of unbalanced distribution samples per lactation and combination of the 7th parity and higher ones
- ✓ Milk production had no significant effect; hence it was excluded from model

Objectives

- ✓ Objectives of this study was to evaluate effects of milk production, days in milk, age at artificial insemination, year and month of insemination, service numbers and parity on:

1. open days
2. calving interval

Fig 1- Longevity trend during 1992-2004



Conclusion

- ✓ CI is a management criterion and supposed to be influenced by milk production indirectly
- ✓ This old training farm has a long history during the past 40 years with three different managements
- ✓ Population number of farm was different during last 40 years
- ✓ All cows were pure and registered
- ✓ Results showed that OD and CI tended to decrease, averagely

Acknowledgment

✓We greatly acknowledge financial support of this research from the Hasheminejad High Education Center, Agricultural Education Center of Khorasan Razave Province, Iran.