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Study the status of industrial dairy herds in Qazvin province

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Abstract

The aim of this study was to investigate the status of dairy farms in Qazvin province, to know the current status of different aspects of management in dairy farms, as well as to provide executives with the latest statistics on the status of dairy farms for future by planners. This project was carried out in a descriptive manner through direct referral and completion of a questionnaire. It examined various aspects of breeding including production, reproduction, nutrition, buildings and facilities, health, disease, culling and so on. The results showed that 51% of the farms were less than 18 years old and more than 50% of units were less than 200 heads. In 82.76% of the farms, along with the livestock occupation, some of the feedstuffs were provided through agriculture. About 60 percent of the owners had high school education and lower, while 80 percent of the technical managers in the studied units had college education. Education in 87.88% for owners, 44.83% for technical managers and 45.71% for artificial insemination agents in the study units was unrelated to dairy business. More than 64% of the owners in the study units were over 50 years of age and 96% of insemination agents were in the age range of 30 to 50 years. Results showed that 75% of nutritionists and 41.38% of artificial insemination agents had 10 to 20 years experience in this field. The results showed that on average the fresh cows were kept in the fresh stall for about 17 days in the studied farms in Qazvin province. The average production in the dairy farms was 37.87 ± 2.05 kg. Except for the percentage of protein in which treatment 4 had lower protein content than the other treatments, the other milk components were not affected. On average, the first postpartum insemination was performed at 57.03 ± 13.75 days postpartum and there was no significant difference between the treatment groups. The mean open days in the studied herds were 144.55 ± 14.57 days and there was no significant difference between treatment groups. There was a significant difference in the percentage of pregnancies in terms of pregnancy rate at first insemination in cows. So that with the increase of farms capacity it decreased. There was a significant difference in fertility of heifers between different treatment groups. The highest fertility percentage was related to treatments 1 and 2 and the lowest fertility percentage in treatments 3, 4 and 5. Mean length of dry period in studied herds was 75.91 ± 0.31 days and there was no difference between experimental treatments. The percentage of artificial insemination in all groups of dairy herds was more than 99% and there was no significant difference between them. The age at first calving was significantly different between the experimental treatments and the age at first calving in treatment 5 was significantly lower than the other

treatments. In this study there was a significant difference between the different groups in abortion percentage. The lowest abortion rate was observed in treatment 1 and the highest incidence was in treatment 3 and 5. Although there was no significant difference between the weaning weights of female calves, there was a significant difference between the weaning weights of male calves. The highest weaning weight were observed in treatments 1 and 2 and the lowest weaning weight in treatment 3. Although the difference between treatment 1 and 5 was significant in the bunk space in the high yielding cows, there was no significant difference between the different categories in the average bunk space in the fresh cows. Feed delivery increased significantly in all lactating dairy cows with increasing capacity of dairy units. There was no significant difference in duration of heat stress between the studied herds. The mean length of heat stress in the studied herds in Qazvin province was 3.15 months. There was no significant difference between the different treatments in the free stall system. In terms of machinery, the number of machines increased significantly as the capacity of cattle units increased. Higher-capacity dairy cows had significantly higher number of flames during the year compared to low-capacity dairy cows. The culling rate was increased along with increasing the difference between treatment 4 and 1 was significant. The mean age of culling in studied herds in Qazvin province was 5.70 ± 1.49 years and there was no significant difference between treatments. There was no significant difference between the different treatments in culling percentage of lactating and dry breeding cows. There was no significant difference between treatments in terms of clinical mastitis, lameness and infertility in the studied dairy herds. The results of this study showed that, unlike milk production and composition, reproductive parameters were decreased and culling was increased condemn with increase in capacity of dairy cows, and the highest efficiency of machinery and hygiene was seen in high capacity categories.

Key words: Dairy farm, Qazvin, management, reproduction, culling