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**Investigation of economic, productive and reproductive performance of Najdi Goat
of Khoozestan province**

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Abstract

To investigate the productive and reproductive potential and the economic aspects of Breeding Najdi goats, and the reasons of population decline, and the breeders point of view, this study was carried out in two parts: In the first part of research, the percentage of descriptive statistics including, livestock job status, education level, maintenance and breeding system, herd composition and livestock position status and the reasons for the goat's strengths and weaknesses were determined by interviewing and completing 50 questionnaires in the Najdi distribution areas. The mean and standard deviation of different productive traits were calculated too. In the second part, the amount of milk yield and its composition at different ages, the goat's body weight and feed consumed at different stages of rearing were determined and compared based on Completely Randomized Designs experiment in Safiabad Animal Science Research Station. Productive and reproductive traits were determined and evaluated by using some usual formula in goats. The results showed that the Najdi goat breeding was quite traditional in the distribution area and crossbreeding between Najdi goats and other breeds, especially Pakistani goats, has been extremely intense. So that, only 15 percent of the goats, more or less are shown the real characteristics of the Najdi goat. 64 percent of the goat owners are keeping goats with sheep and the others (36 percent) keeping goats alone. The main job of 44 percent of goat owners is animal husbandry and 56 percent of them have different jobs, but they raise livestock to make extra money for covering their life expenses. Those who hold more goats, sell the surplus of products after personal consumption. The grazing is the

usual goats feeding in the distributed area and proper manual feeding is not happen due to the financial situation of the breeders. The results of station studies showed that, the mean of birth weight in Najdi males and females were 2.86 ± 0.46 and 2.54 ± 0.40 , the mean of weaning weights were 13.04 ± 1.36 and 11.49 ± 0.54 , the mean of weight at 6 months were 15.78 ± 1.83 and 14.21 ± 0.93 and the mean of one-year weight were 23.26 ± 2.59 and 18.97 ± 1.76 kg, respectively. The mean of daily milk yield in Najdi goat was 0.685 ± 0.186 kg, the mean of lactation duration was 231 ± 29.45 days, and the mean of interval between two births was 255.05 ± 25.35 days. Najdi goat has two births in a year. The mean of pregnancy rate, prolificacy rate, fecundity rate at birth time and fecundity rate at weaning time, the productive power and the reproductive power were 0.88, 1.22, 1.49, 1.35, 1.2 and 1.43 kg respectively. The highest dry matter intake was 1.284 ± 0.120 kg for late pregnancy and the lowest was 1.084 ± 0.101 kg for late lactation ($P < 0.05$). However, there was no significant difference between dry matter intake before pregnancy and late lactation. The highest daily milk yield was obtained in the 4-year-old goats with 0.769 ± 0.143 kg, and the lowest was happen in the 2-year- ones with 0.588 ± 0.252 kg ($P < 0.05$). Goat milk composition did not differ significantly at different ages. The economic calculations showed that the price of each diet, based on feed intake at pre-pregnant, late pregnancy and lactation duration were 8710 ± 811 , 10278 ± 975 and 9130 ± 850 Rials respectively, and this difference was significant ($P < 0.05$). The feed conversion efficiency was calculated 1.66 kg for 1 kg milk production. From the economic aspect, the relative frequency of Najdi goat keeping was 43.05% and in contrast, the relative frequency of Pakistani goat keeping was 56.95%. Thus the Pakistani goat is a serious competitor against to the Najdi goat keeping. According to the results of this study, it seems by technical assistance and supporting the Najdi goat keepers, this goat has the potential to increase productive and reproductive potential toward a better economic performance. Also this strategy helps to maintain this racial mass from complete extinction.

Key words: Najdi goat, Productive traits, Reproductive traits, Economic performance.