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The study of difficulties of incubation and the ways of improvement of hatchability in breeder ostrich farms

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Abstract

This project carried out for study of the difficulties of incubation of Isfahan Province breeder ostrich farms for two years and by 12 breeder farms. Information related to egg and chick production including: nutrition, the way of rearing breeder groups, the age and race of ostrich breeders, amount of egg production, sanitation operation, the method of egg storage, percentage of fertility and hatchability, the way of rearing, diseases and livability of ostrich chickens up to one month age, at 1 year production were studied. The required information gathered by the questioner forms and the forms for egg production and incubation that distributed among the farms. The results indicated that mean of length and width of the breeder pens were 61 and 10.5 meters and area and per capita area of the breeder pens were 640.5 and 148.8 square meters respectively. The production season regardless of summer off-production, was between 7 to 10 (average 8.1) months. At two production seasons, the average egg production per hen was 42 to 55 eggs, the number of chicken per hen was 17.7 to 26.6, hatchability was 42.8 to 46.6 percent and the egg fertility was 71.8 percent. The chemical composition of production diet for crude protein, crude fat, crude fiber, calcium and total phosphorous were 18.3, 12.8, 11.2, 2.7 and 0.9 percent of the diet respectively and for the breeder maintenance diet were 16.5, 2.6, 12.8, 1.5 percent respectively and 0.6 percent available phosphorous. The mean of metabolizable energy was less, crude protein was more and crude fiber of production diet was less than recommended levels, while the amounts of calcium, phosphorous and linoleic acid were suitable. The mean of embryonic mortality of incubateable eggs was about 23.3 percent, while the 8.2 percent of the chicks that hatched in the hatchery also died, thus the total mean of mortality was 31.6 percent. The average livability of the chickens up to one month age was about 88 percent (12 percent mortality) and the causes of the mortality were 44.4 percent by stomach impaction, 44.4 percent by yolk sac infection and 11.2 percent by Newcastle and enterotoxemia diseases. From the farms difficulties was the

low percentage of hatchability by the reason of high incubation mortality that several factors are involving this matter. The high rate of egg infertility at the beginning of production season (24.2 percent of total infertile egg) is also an important problem of breeder farms that this is probably because of meteor condition, unsuitable maintenance diet and not separation of the ostrich breeders at the end of production season. For reducing summer off-production and egg infertility at the hot months (66.8 percent of the total infertile eggs) the modification of the diet based on the season and feed intake, feeding anti heat stress supplements like vitamin C and using preparations like installing shed and trees, spray water in the hot times of the day and providing cool water are recommended.

Key words: Incubation, Hatchability, Breeder ostrich.