EGG QUALITY CHARACTERISTICS OF EMU (*DROMAIUS NOVAEHOLLANDIAE*)

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INTRODUCTION

Commercial emu farming is an upcoming business avocation in India. Emu is mainly reared for its oil and meat, however in emu breeding farms, producing cost effective day old emu chick is a principal activity which decides the profitability of breeder as well commercial emu farms. Hatchability plays a major role in deciding the cost of production of day old emu chick. A preliminary study on production performance of EMU breeders was carried out by Boopati et al. (2012) .To evolve suitable package of practices for emu incubation in tropical regions, we are in need of basic understanding about the quality characteristics of emu egg..Keeping in mind, an experiment was designed to study the external and internal quality characteristics of emu egg in tropical region.

MATERIALS AND METHODS

Six freshly laid emu eggs were collected from a commercial emu breeder farm in Tamil Nadu. The age of emu breeder was four years and they were in the second year mid production cycle. The birds were maintained in semi intensive system of rearing with provision of standard pen and run space. They were provided with *adlibitum* commercial emu breeder feed with 21 per cent protein, 2650 kilo calorie metabolizable energy per kg diet, three per cent calcium and 0.5 per cent available phosphorous. As supplemental feeding, they were provided with 250 g and 50 g of *Desmanthus* fodder and sprouted bengal gram per bird per day to improve the reproductive efficiency.

Fresh and potable water was made available at all times during the breeding period. The collected eggs were subjected to study external and internal quality parameters on the collection day as per the standard methods. The data were subjected to standard statistical analysis in the form of Mean ± SE as per methods described by Snedecor and Cochran (1985).

RESULTS AND DISCUSSION

The mean egg weight of emu was 478.83 ± 30.47 g, however, higher values of 517 g (Menezes *et al*., 2001), 583.46 g (Jagatheesan *et al.,*2010) , 575 g (Rajasekhar Reddy, 2010) and 566.43 (Boopati et al., 2012) were reported in various experiments and may be due higher age of the breeder birds. The mean breadth and length of the egg were 91.37 ± 0.55 and 131.38 ± 0.54 mm. The mean shape index and surface area were 69.55 ± 0.53 and 390.76 ± 2.59 sq.cm and similar value of 68.10 for shape index reported by Jagatheesan *et al*. (2010). The mean albumin, yolk and egg shell weights were 253.17 ± 13.81, 140.17 ± 11.93 and 85.50 ± 4.84 g respectively and it is in agreement with the values of 240,130 and 80 g of albumin, yolk and egg shell weights (Jagatheesan *et al*.2010). The mean per cent albumin, yolk and shell weight to egg weight were 53.02 ± 0.48, 29.09 ± 0.59 and 17.89 ± 0.21 respectively and Sales (2007) reported a range of 41-53, 29-47 and 13-18 per cent of albumen, yolk and egg shell to the egg weight. The total edible component and inedible component weight of emu egg were 393.11 ± 25.72 and 85.51 ± 4.84 g. The mean per cent edible and inedible component weight to egg weight was 82.10± 0.21 and 17.86 ± 0.22. The mean egg shell thickness was 1.47 ± 0.02 mm and it is in agreement with the value of 1.13 mm (Jagatheesan *et al*. 2010), however Sales (2007) observed a wide range of (0.45 to 1.10 mm) shell thickness values. The higher per cent egg shell weight to egg weight is due to thicker shell of emu egg.

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