Performance of New Zealand White and Soviet Chinchilla Rabbits Under Agro Climatic Conditions of Mizoram

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Summary

The present study evaluated two broiler breeds of rabbit viz New Zealand white and Soviet Chinchilla for their productive and reproductive performance under agro climatic conditions of Mizoram. It was found that the litter size at birth was 7.35 and 7.89 for New Zealand white and Soviet Chinchilla rabbits respectively while the litter size at weaning was 5.25 and 5.65 respectively. There was no significant difference between the breeds for any of the productive and reproductive parameters under study.

Key words: Mizoram, New Zealand white, Rabbit, Soviet Chinchilla

Northeastern region is a meat consuming zone and a wide variety of meat, including those of semi-domesticated animals, is consumed. Rabbit has been introduced in this region as a "micro livestock" to produce meat for household consumption. Unlike other food animals (excluding poultry), rabbit requires less space to accommodate and a family in one meal can consume the whole carcass. The shorter generation interval and high reproductive potential is advantageous in rabbit production. In spite of having huge potential, the rabbit production has not got much popularity until recently (Bujarbarah and Das 1993). Selection of suitable breed of rabbit to particular environment conditions is very much essential for successful rabbit production. The livability and performance of rabbit vary with agro eco system. The present study evaluated two broiler breeds of rabbit for their performance under Mizoram agro climatic conditions. Two broiler breeds of rabbit viz New Zealand White and Soviet Chinchilla (30 in each breed) were taken for the study. All the animals were maintained in low cost housing system using bamboo and are fed with commercial pellets and green fodder. The commonly used green fodders (Congo signal grass, sweet potato leaves and Ankasa leaves) were evaluated for their nutrient content. The green fodder were collected, sun dried and further dried in a hot air oven (50 ^{0}C for 24 h) to calculate the dry matter. After assessing the dry matter content of the samples, they were analyzed for proximate composition (crude protein, crude fiber, ether extract, total ash and nitrogen free extract) as per the standard procedure (AOAC 1980). Body weight was taken at 15 days interval from birth onwards and compared between breeds. The adult animals were mated as per the standard mating protocol and litter characteristics were studied. The data were analyzed using the standard methods given by Snedecor and Cocharan (1989).

The present study observed that the litter size at birth was 7.35 and 7.89 for New Zealand White and Soviet Chinchlla rabbits respectively while the litter size at weaning was 5.25 and 5.65 respectively. The litter weight at birth and weaning was 210 and 235 g and the litter weight at weaning was 2.35 and 2.56 kg respectively for New Zealand White and Soviet Chinchilla rabbits (Table 1). The individual body weight at 90 days was 1.68 and 1.70 kg respectively. The proximate composition of few fodders fed to the rabbit is given in table 2. The proximate compositions of the fodder samples were within the range as reported earlier (Gupta et al. 1993, Das and Sikka 2007). The litter characteristics observed in the present study was in agreement with Das and Sikka (2007). The results suggest that rabbits have potential to be incorporated as micro animal in the integrated food production system, for supplementary income and for obtaining quality meat for household consumption. The shorter generation interval and high reproductive potential is advantageous in rabbit production. The nutritive value of rabbit meat is very high as compared to other meat. It has been said that rabbit meat is easily digestible; the protein content is higher than that of many kinds of meat and the protein value of domestic rabbit rank higher than any other meat used for human consumption besides being rich in vitamin B and low in cholesterol content (Jithendran 2000). The rabbit meat became popular in cities like Shillong and demand is very high. One kg of rabbit meat fetches from Rs 150 – 200 in the local market, which reveal the, market potential. In spite of having huge potential in NEH region, rabbit

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production has not got much popularity until recently. It suggests that though rabbit can be produced with low cost, proper knowledge about rabbit farming is very much essential before opting for venture. There lies a potential to make unemployed rural youths trained and to take up rabbit farming as a source of employment and income generation.

It may be concluded that both New Zealand white and Soviet Chinchilla rabbit performed in a similar way and there was no significant difference among themselves in any of the production parameter.

References

AOAC. 1980. Official Methods of analysis, 13th edition. Association of Analytical chemist, Washington DC, USA.

Bujarbaruah KM, Das A 1993. Scope and future of rabbits in NEH Region of India. Ind J Hill Farm 6 (1): 103-108.

Das SK, Sikka AK 2007. Effect of different housing and feeding systems on the performances of broiler rabbit in Eastern Himalayan Region of India. Liv Res Rural Dev 19 (8): 2007.

Gupat HK, Yadav BPS, Gupta JJ, Bujarbaruah KM 1993. Evaluation of complete feed in rabbit utilizing tropical grasses. Ind J Anim Nutr 10(1): 27-30.

Jithendran 2000. Rabbit production – a cottage industry for Himalayan region. Envis bulletin, Himalayan Ecol Dev 8 (1): 9-11.

Snedecor GW, Cochran WG 1989. Statistical Methods, 8th ed. Lowa state University press, Ames, Lowa, USA.

Table 1: Productive and reproductive performance of New Zealand white and Soviet Chinchilla rabbit

Parameters	Soviet Chinchilla	New Zealand White
Litter size at birth	7.89	7.35
Litter size at weaning	5.65	5.25
Litter weight at birth (g)	235	210
Litter weight at weaning (kg)	2.56	2.35
Body weight at 90 days (kg)	1.70	1.68
Inter kindling interval (days)	82	84

Table 2: Proximate composition of fodders fed to the rabbit

Name	DM (%)	CP (%)	CF (%)	EE (%)	TA (%)	NFE (%)
Congo Signal	25.25	13.12	26.04	3.81	7.59	49.44
Sweet potato leaves and stem	15.25	4.10	35.24	2.49	11.97	46.20
Spilanthus sp	13.24	10.44	55.38	8.93	9.63	15.94