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READAPTED DOES FROM HIGH TO NORMAL AMBIENT TEMPERATURE

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INTRODUCTION

Does maintained at high environmental temperatures for long periods show a poor reproductive performance (Simplicio *et al.*, 1991), but their response on return to a cooler environment is not known. In this experiment the recovery of fourteen does which had been kept in a hot environment for some months, was examined.

MATERIAL AND METHODS

Fourteen does about 5 months of age and reared in a traditional building (minimum temperatures normally 14-24°C during the year) were housed in a climatic chamber at a constant temperature of 30°C. After a variable number of parturitions and an average period of five months, they were then submit to a re-adaptation phase by being housed in the traditional building for about four months (May to October). Data from 31 parturitions were compared to 36 parturitions obtained from the same does during their previous phase in the climatic chamber, the first parturition in the climatic chamber was disgarded, because some values were somewhat lower than those recorded in the following lactations.

We may assume that the records from the successive parturitions in the normal environment are not significantly different, as Sabater *et al.* (1993) found with similar does and the same environment.

RESULTS AND DISCUSSION

Does recovered immediately when housed in the traditional building. Weight increased ($P < 0.01$) within a few days by about 300 g on average and was maintained throughout the following cycles. Feed intake also was higher ($P < 0.001$) and these two parameters were consistant with a higher weight at birth ($P < 0.01$) and at weaning of the individual rabbits ($P < 0.001$) (Table 1). Probably the difference between litter size in both environments is not significant, due to the high variability of the values.

Productivity parameters from readapted does were similar to those obtained under the same conditions by Cervera *et al.* (1993) or Sabater *et al.* (1992). Does were kept from May to October, when minimum temperatures were up to 25°C, and mostly about 20°C, but even in this warm environment, body weight, litter weight and feed intake were apparently normal, when considering the whole period, although in the middle of the summer the performance is usually poorer (Méndez *et al.*, 1986). It seems that does can tolerate high ambient temperatures for long periods, two to seven months in our case, with no permanent ill effects.

Table 1. Performance of readapted does

	Readapted	30°C	SE	sig
Services/conception	1.7	2.0	0.24	NS
Feed intake g DM/day pregnancy, days 14-32 lactation, days 1-21	153 269	112 230	10.0 5.1	*** ***
Litter at birth No alive g/rabbit	8.4 444	7.5 355	0.29 13.9	NS **
Litter at 21 dayd No g/rabbit	6.9 328	6.1 282	0.23 7.6	NS **
Litter at 35 days No g/rabbit	6.7 840	5.9 679	0.21 19.1	NS ***
Weight of does mating post-partum	4.00 3.83	3.75 3.59	0.039 0.040	** **
Weight change of does ¹ lactation, days 1-21 lactation, days 22-35	275 -88	242 -101	27.2 22.8	NS NS

¹ covariate, weight of litter

p<0.01, *p<0.001, NS non significant

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REFERENCES

- CERVERA, C., FERNANDEZ CARMONA, J., VIUDES, P., BLAS, E. 1993. Effect of remating interval and diet on the performance of female rabbits and their litters. *Anim. Prod.* 56:399-405
- SIMPLICIO, J., FERNANDEZ CARMONA, J., CERVERA, C. BLAS, E. 1991. Efecto del pienso sobre la producción de la coneja a una temperatura ambiente alta. *Anal. INIA, Prod. Anim.*, 9:29-40.
- MENDEZ, J., de BLAS, J.C., FRAGA, M.J. 1986. The effects of diet and remating interval after parturition on the reproductive performance of the commercial doe rabbit. *J. Anim. Sci.* 62, 1624-1634.
- SABATER, C., TOLOSA, C., CERVERA, C. 1993. Factores de variación de la curva de lactación de la coneja. *Arch. Zoot.* 42:105-114