THE EFFECT OF WEANING AGE ON PERFORMANCE AND MEAT QUALITY IN BROILER RABBITS

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INTRODUCTION

Weaning is a stressful period for young mammals, which supposes the separation from the mother, milk withdrawal and adaptation to a new solid feed. Gidenne and Fortun-Lamothe (2001) and Trocino *et al.* (2001) observed that early weaned kits showed a lower live weight in comparison with rabbits weaned at 32 days of age. In contrast, Zita *et al.* (2005) found that the early weaned rabbit had higher live weight than the later weaned rabbits. On the other hand, Gidenne *et al.* (2004), Zita and Tůmová (2005) and Tůmová *et al.* (2006) did not prove any significant differences in live weight during time of fattening and at the end of the experiment (Zita *et al.*, 2007). Early weaning was less problematic when young rabbits showed a slight solid feed consumption (Gallois *et al.*, 2003, 2004) which led to earlier development of digestive tract. It seems that digestive tract development do not have any effect on feed consumption in early and traditional weaned rabbits (Gidenne and Jehl, 2001; Xiccato *et al.*, 2000; Zita *et al.*, 2003; Zita and Tůmová, 2005; Tůmová *et al.*, 2006) and mortality (Trocino *et al.*, 2001; Gidenne and Fortun-Lamothe, 2004). Carcass characteristics were not influenced by weaning age (Zita *et al.*, 2007). In our previous experiments (Tůmová *et al.*, 2006) age of weaning did not affect dressing percentage.

THE AIM OF THE STUDY

The objective of the present work was to evaluate the effect of the weaning age on growth, feed consumption and slaughter parameters in broiler rabbits.

MATERIALS AND METHODS

In the experiment thirty Hyplus® rabbits (♂ PS59 x ♀ PS19) were used. The rabbits obtained from a commercial farm were weaned at the age of 21, 27 and 34 days by the 10 ones. Rabbits were placed in fattening cages (0.15 m^2 per rabbit). The kids have access the solid feed of the does till weaning. Water and commercial type of feed mixture (9.5 MJ ME, 14.75 % of crude protein, 4.18 % of fat, 15.9 % of crude fibre) were available *ad libitum*.

Animals were individually weighed every week, feed consumption was measured daily. Also mortality and morbidity were recorded in groups over the whole period of experiment. At the end of the experiment, 77 days of age, six rabbits per group of the average live weight were slaughtered. The slaughter and carcass dissection were carried out in an experimental slaughterhouse. Rabbits were fasted overnight, and slaughtered the following morning by electric stunning and bleeding by jugular cut. The method of carcass measurements was harmonised with Blasco and Ouhayoun (1996).

Results of performance and slaughter parameters were evaluated by one-way ANOVA, using the GLM procedure of SAS (SAS Inc., 2003).

RESULTS

Figure 1: Growth of rabbits (g)

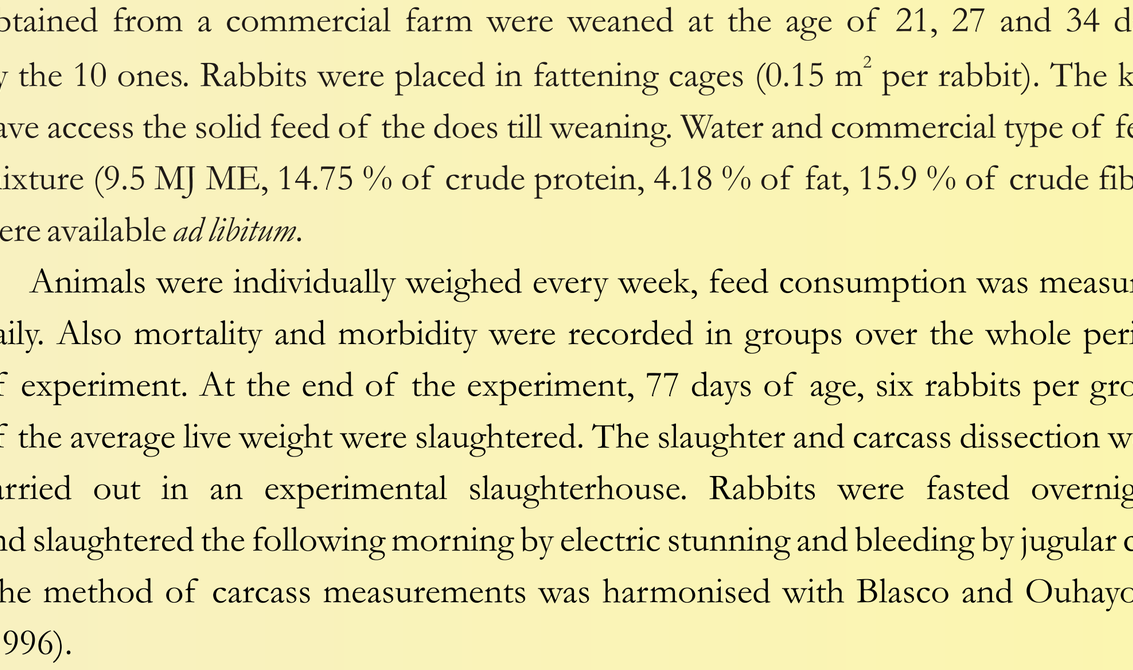

Figure 2: Feed conversion per kg live weight (kg)

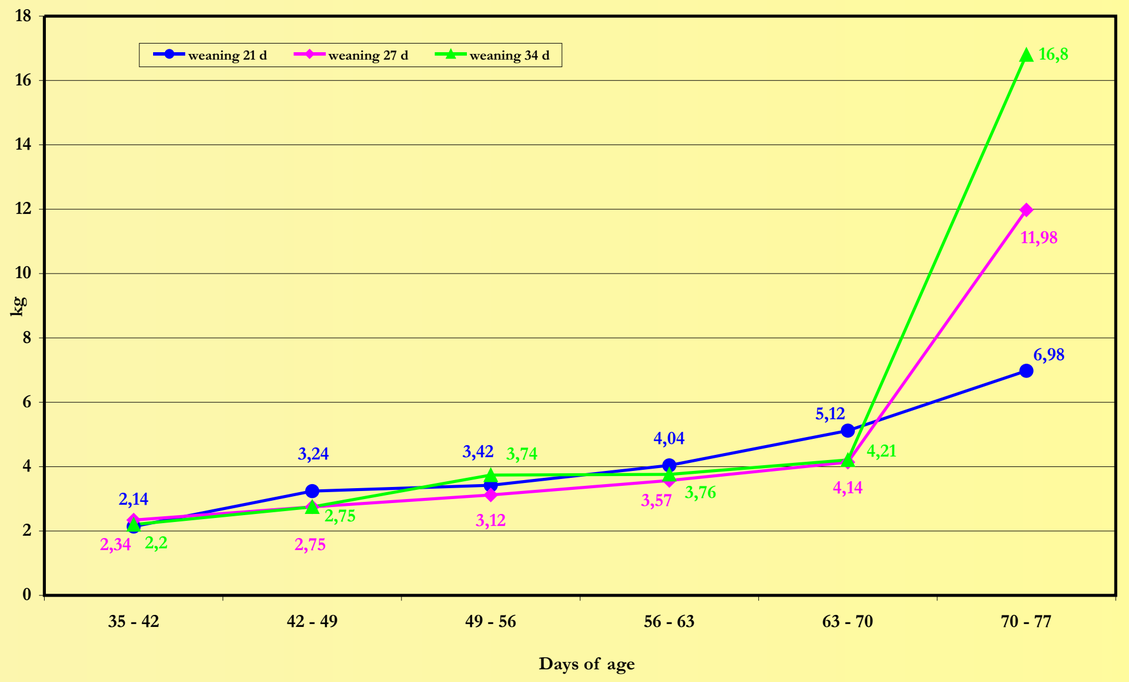

Table 1: Carcass analysis at 77 days of age (n = 6)

Characteristics	Weaning age (days)			Significance	SEM
	21	27	34		
Live weight 77th day of age (g)	2 825	2 997	3 008	ns	36.14
Carcass weight (g)	1 526^{b}	1 714^{a}	1 700^{a}	**	27.73
Dressing percentage (%)	52.58^{b}	56.75^{a}	55.91^{ab}	***	0.53
Fore part of the carcass (%)	49.18	47.17	46.27	ns	0.51
Hind part of the carcass (%)	48.39^{a}	44.31^{b}	44.73^{b}	*	0.65
Loin (%)	17.84	16.70	16.86	ns	0.25
Hind legs (%)	30.70^{a}	27.55^{b}	27.87^{b}	**	0.45
Thigh muscles (%)	22.28	20.84	21.03	ns	0.30
Renal fat (%)	2.99^{a}	1.28^{b}	1.29^{b}	**	0.04
Liver (%)	5.75^{a}	4.12^{b}	4.33^{b}	**	0.22

***P ≤ 0.001; **P ≤ 0.01; *P ≤ 0.05; ns = nonsignificant difference; SEM = standard error mean
a, b - Means marked with a different superscript letter within each column are significantly

CONCLUSION

There was no significant effect of weaning age on growth, weight gain, feed consumption and feed conversion. Rabbits weaned at 21 days of age have higher weight gain and lower feed consumption. Slaughter parameters at the end of the experiment, at 77 days of age, were significantly influenced by the age of weaning. Dressing percentage was significantly higher in rabbits weaned at 27 days of age. Share of single parts from the carcass in rabbits weaned at 21 days of age were significantly higher. Significantly higher proportion of renal fat was in the group weaned at 21 days of age in comparison with rabbits weaned at 27 and 34 days of age.

ACKNOWLEDGEMENTS

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