

Practical Approach to Minimize Feed Wastage in the Rabbitry

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Summary

To overcome the feed wastage problem the present experiment was conducted in which 12 does with their suckling rabbits (60 young) were selected and randomly divided into two equal groups. The recommended pellet and crumbled pellet (small size devoid of glossy surface) were supplied as feed for 30 consecutive days after which precise assessment was performed. Result show that the crumbled pellet consumption could minimize feed waste from 12.4% in control group to 0.7% in experimental group with no adverse effects. It has also caused 13% increase in young's weight rate.

Key words: nutrition, feed consumption, wastage, rabbit

Introduction

Pellet size and form in rabbit's feed has nutritional and economical importance. Since estimated charges for feed consumption per capita rabbit is remarkable so it is very important to approach a feeding method and system to reduce rate of consumption and specially feed wastage to a amount that, to keep the animal in a good physical condition and promotes its normal growth (Cheek 1987, Church 1991). Preliminary study has indicated that the size and form of pellets are considerably important in

rabbit feeding (Ensminger *et al* 1990, Manning *et al* 1994, Mawrtens 1994). It has been shown that the factors of size and form of pellet have a noteworthy influence on feed consumption and wastage. In this regard certain efforts were made to minimize the feed wastage to the most possible amount. Previous results have recommended pellet of cylindrical form with diameter of 3-4mm and length of 3-6mm (Ensminger *et al* 1990, Gidenne 1992, Harris *et al* 1984). Our observations reveal that young rabbits 20-50 day-old of age which are kept with their mothers are wasting most of their feed when these pellets were supplied. This study to some extent has contributed to solve the nutritional and economical problem in our rabbitry.

Materials and Methods

12 dose and 60 young of 20-day-old of Dutch rabbit were selected and randomly divided into two equal groups. Group A was feed from cylindrical (usual) form with diameter of 3-4mm and length of 3-6mm and group B was feed crumbled (experimental) form for period of 30 days. Fresh water was available at all the times. Each group including 6 dose and 30 young were placed in 6 separate cages with mesh floors. The animals were weighted on days 0,5,and 30 of experiment and their health and dental growth were checked daily. Daily amount of wasted feed in each group was measured and then replaced by 1,500g of experimental or usual feed. After 15 days feed of control group (using usual pellet) was given to experimental group and vice versa. From beginning of second half of experiments amount of 300g feed was added.

Results and Discussion

The waste feed was collected and measured in control and experimental groups are showing table 1. Result indicates that sum of wasted feed during 30 days in control group was 6,023g where in experimental group was 335g which has shown 5,688g reduction in feed waste (Fig. 1). Differences were significant when tested by t test ($P<0.01$).

The body weight of animals from control and experimental groups were also evaluated (Table 2).

Table 1. Amount of wasted feed in control and experimental groups

Series	Supplied feed each group		Wasted feed (g)			
	Period (day)	Rate (g)	Cont. group	Waste (%)	Exp. group	Waste(%)
1	5	7500	1190	15.9	24	0.3
2	5	7500	2007	26.8	107	1.4
3	5	7500	2090	27.9	110	1.5
4	5	9000	260	3	40	0.4
5	5	9000	243	2.7	30	0.3
6	5	9000	233	2.6	24	0.3
Total	30	49500	6023	12.2	335	0.68

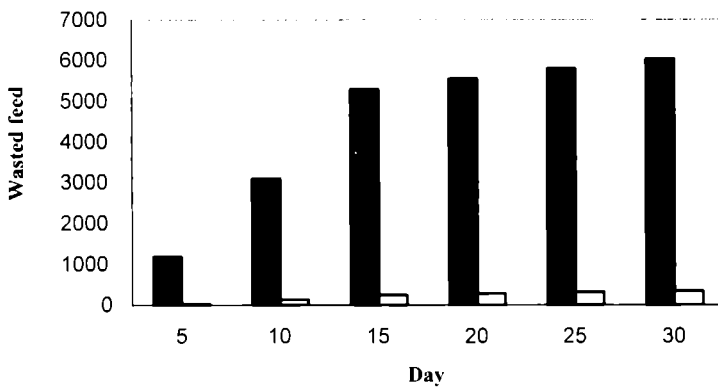


Figure 1. Amount of wasted feed in rabbits ■ control group., □ experimental group

In experimental group rabbit litters were 2,958g more in body weight as compare with control group and difference was statistically significant ($P < 0.01$).

Also the experimental lactating does have shown 490g less reduction in body weight in compare with control group which analytically shown significant difference ($P < 0.05$).

As it has been pointed out in this study reasons for feed waste in rabbitries which is mainly related to young rabbits of 20–50 day old, are size and form of feeding pellets

(Harris *et al* 1984). Hard feed intake usually starts in growing young rabbits of 3 week old.

Table 2. *Changes in body weight of control and experimental groups*

Description	Litters		Dam	
	Cont. group	Exp. group	Cont. group	Exp. g.group
Body weight at beginning of experiment	5638	5910	16860	16850
Changes in body weight During first 15 days	+6599	+8092	-920	-620
Changes in Body weight during second 15 days	+4048	+5513	-160	+30
Sum of weight changes	+10647	+13605	-1080	-540

Since rabbits mainly use their lips and teeth rather than hands while feeding so the size of supplied pellet is important factor to be considered (Ensminger *et al* 1990). In case pellets are large, their pieces drop on the floor of cage and pass through mesh and mix with animals excrements this has been mostly observed in inexperienced young rabbits. But it was noted the crumbled pellets could be easily consumed by young rabbits, because of their rough surface and polygonal shape, they remain in animals mouth and could be completely consumed. Consequently there will be a reduction in waste and gas production as well. Also, with minimum feed waste, more feed will be available for lactating dose in turn cause an increase in their milk production, which is a good advantage for does health and better growth of young ones.

In conclusion use of crumbled pellets for lactating rabbits having litters of 20–50 day old result to minimize the feed waste by 12.4 % in control group and 0.7 % in experimental group without any adverse effects and it also cause an increase in growth rate of young rabbits by 13 %. Meantime contributing to reduce waste and harmful gas production.

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