

5. SUMMARY AND CONCLUSION

This study was carried out at the Experimental Farm , Faculty of Agriculture at Moshtohor , Zagazig University . Ninety six New Zealand White (NZW) rabbits were used in this study to investigate the effects of rabbit manure on the performance of growing rabbits during 94 / 1995 . Growth trials were performed on growth performance and carcass traits of the growing rabbits . A digestibility trial was undertaken to determine the effect of treatments and sex on the nutrients digestibility of the experimental diets . Results obtained could be summarized as follows .

Body weight :

- 1- Results showed that body weight of rabbits decreased with increasing level of rabbit manure in the experimental diet from 0 (control diet) to 5 , 15 and 25% at different ages from 5 to 16 weeks of age . Rabbits fed 0 and 15 % rabbit manure recorded the highest average body weight followed by those fed , 5 and 25 % except at 13 , 14 and 15 weeks of age . Rabbits fed diet containing 25 % rabbit manure level recorded the lowest average body weight . In general , level of 15 % rabbit manure was suitable for growing rabbits without any adverse effect on body weight .
- 2- Results showed that males of growing rabbits recorded higher body weight than females at different ages studied without any significant differences in body weight at all ages of the study except at 10 weeks of age .

Daily gain :

- 1- Daily gains of rabbits fed 0 % and 15 % rabbit manure were almost similar at all ages of the study without any significant differences due to the treatment effect .
- 2- Rabbit manure up to 15% in the diet had no adverse effect on daily gain of growing rabbits .
- 3- Male rabbits gained more than females at all age intervals studied except at 12 to 16 weeks of age interval .

Feed intake :

- 1- In general feed intake increased with increasing rabbit manure in rabbit diets up to 25% .
- 2- Male rabbits consumed more feed intake than female at 5-8 , 8-12 and 5-16 weeks of age .
- 3- Rabbits of heavier body weight at the start consumed more feed intake than lighter ones .

Feed conversion :

- 1- Feed conversion of rabbits fed diets containing 0 , 5 , 15 and 25 % rabbit manure at the whole experimental period (5 to 16 weeks of age) were nearly the same without any significant differences . Rabbits fed diets containing 0 and 15% rabbit manure recorded the best feed conversion values at 5 to 8 and 8 to 12 weeks of age with no significant differences between the two treatments .
- 2- The differences in feed conversion values due to sex effect were not significant at all age intervals of the study .

- 3- Rabbits of group three (G₃) (lighter weight at start) recorded the lowest feed conversion values (more efficient in converting feed into weight gain at all age intervals of the study) .

Nutrients digestibility :

- 1- Rabbits fed the diet containing 5% rabbit manure recorded the highest digestibility values for all nutrients , while those fed the 25% rabbit manure level achieved the lowest ones . However , the differences in digestibility of all nutrients due to treatment effect were not significant.
- 2- The prevention of coprophagy in rabbits decreased the digestibility of all nutrients , indicating the importance of coprophagy as a biological process which may improve the performance of rabbits .

Carcass traits :

- 1- Rabbits received the diet containing 15 % rabbit manure surpassed those of other treatments in fasted weight , dressed weight and dressing percentage , while , those received the diet with 25 % rabbit manure recorded the lowest values for fasted weight, dressed weight and dressing percentages . No significant differences were detected between 0 % level and other levels in fasted weight and dressed weight . Also , no significant differences in bonless meat % due to treatment effects were observed . Carcass cuts percentages (fore quarters , chest , loin and hind quarters relative to fasted weight) and different organs were nearly similar , with no significant differences .
- 2- Fasted weight , dressed weight, dressing percentage and bonless meat% of male rabbits were higher than those of females , without any significant differences due to sex effect .

Meat composition :

- 1- CP, EE and ash contents of rabbit meat differed slightly with treatments .
- 2- CP of meat for males was slightly higher than that of meat for females of rabbits . While the reverse was observed for EE content . Also , ash content of meat was nearly the same for both sexes of rabbits . Sex effect on meat composition was very limited and negligible up to 16 weeks of age .

Blood components :

- 1- Total protein , albumin and globulin of blood of experimental treatments surpassed the same traits of blood with control diets (without rabbit manure) , except globulin with diet containing 25 % rabbit manure . Increasing rabbit manure in diets resulted in decreasing cholesterol and total lipids of blood for rabbits fed diet containing 5 , 15 and 25 % rabbit manure .
- 2- Sex had a clear influence on blood components . Female rabbits recorded higher total protein , albumin , albumin / globulin ratio, cholesterol , GPT and uric acid than males with significant differences ($P < 0.05$, $P < 0.01$ and $P < 0.001$) for total protein , albumin , GPT and creatinine only .

Cecum activity :

- 1- No significant differences in cecum contents due to treatment effects were detected except for ammonia . The mean of total count ; E. Coli count and pH values of cecum contents of rabbits fed the diet containing 25 % rabbit manure were higher than those for other ones , but the differences were not significant . While , ammonia of cecum

content for rabbits fed the diet containing 15 % rabbit manure was higher ($P < 0.05$) than that of other rabbits . Values of TVFA in cecum content for rabbits fed the control diet (without rabbit manure) were higher than those for other ones , but without significant differences .

2- No significant differences were observed due to sex effect on cecum content traits of growing rabbits .

Economical efficiency :

1- From the economical point of view , rabbit manure could be incorporated in rabbit diets up to 15% of the diet .

From the nutritional and economical point of view , results of this study showed that rabbit manure could be used , as a cheap ingredients in commercial growing rabbit diets up to 15% without any adverse effect on rabbit performance .