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Role of Italian Ryegrass in feeding rabbit and meat goose

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Key words : IRR system , Italian ryegrass , rabbit , meat goose , rice-forage-animal multi-farming system

Introduction Italian ryegrass-Rice Rotation (IRR) system has been accepted as an excellent example of ecological agriculture system for its benefits in both economy and ecology (Yang Z. Y. *et al.* 1997) . In the present work , we studied the effects of feeding Italian ryegrass on the weight increase of rabbits and meat geese .

Materials and Methods Italian ryegrass was planted in the paddy fields in Zhuhai city , Guangdong province on December 1st , 2006 . In experiment 1 (E1) , fifteen New Zealand white rabbits with similar weights and birth dates were equally and randomly divided into 3 groups . They were fed with sufficient concentrates + sufficient ryegrass in Group 1 ; 80% concentrates + sufficient ryegrass in Group 2 ; and sufficient concentrates + sufficient wild grass (conventional ways adopted by most local farmers) as control (CK group) . Experiment started on 17th April and ended on 7th May . In experiment 2 (E2) , 15 local geese named MaJiang Goose were used . Same diet treatments were used as E1 , except that in CK group no grass was provided . Experiment started on 14th April and ended on 8th May . In both experiments , feed-on-offer and residual feed were weighted . The rabbits were weighed every five days , while the meat geese were weighed only at the beginning and the end of experiment .

Result In E1 results showed that using ryegrass (Group 1) significantly ($P < 0.01$) increased the growth rate of rabbits compared to using wild grass (CK group) excluding the first weighting data (Figure 1) . When reducing feed by 20% , the growth rate of rabbits decreased , but the differences were not significant . In E2 , the average liveweight gain of geese fed with ryegrass (Group 1) were 19.2% higher than that fed with no feeder greens (CK group) , and 6.9% higher in the group supplied with 20% less feeds (Group 2) than those in Group 1 , but there was no differences in average liveweight gain statistically among 3 groups (Table 1) .

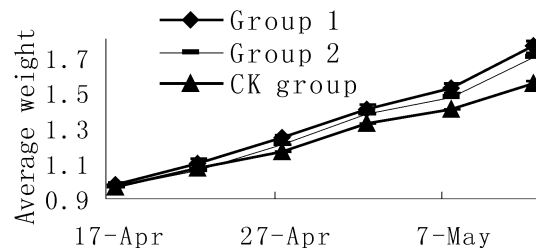


Figure 1 Average weight of rabbits under various treatments in diets .(kg±SD)

Table 1 Average weight of meat geese under Various treatments in diets . (kg±SD)

	Group 1	Group 2	CK group
14 th April	2.80 ± 0.08	2.72 ± 0.06	2.73 ± 0.02
8 th May	3.67 ± 0.24	3.64 ± 0.23	3.44 ± 0.14
Increase	0.87 ± 0.16	0.93 ± 0.06	0.73 ± 0.10

Conclusions Feeding Italian ryegrass instead of wild grass can increase the growth rate of rabbit . But reducing feed supply by 20% may decrease the growth rate . In comparison , feeding meat goose with additional ryegrass can increase growth rate of meet goose . Our research proved that introducing Italian ryegrass into local animal production system can bring great economic returns compared to the conventional feeding methods adopted by local farmers in southern China . With the rapid economic development in China , a rice-forage-animal multi-farming system based on the IRR system is one of important meat production systems .

Reference

Yang Z. Y. , Xin G. R. , Yue C. Y. *et al.* (1997a) . A case study on benefits of Italian ryegrass-rice rotation system . *Pratacultural Science* , 14 , 35-39 . (in Chinese) .