The Sustainable Raising of Native Chicken

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Introduction

Unless you use native chicken, otherwise they are not easy to survive in the world. The definition of use is not only to eat them but also to enjoy with them. This report will consider how to raise native chicken based on sustainable way (Figure 1 and 2).

Balance of nutrition

Balance of nutrition not only can let chicken have normal growth and health but also can let chicken have good appearance. This is very important for the native chicken during show and in leisure farms. Lai et al. (2010) report showed if we provided balance nutrition, in this case is Zn, then the chicken will have high score on feathers.

1. Optimum age to market of native chicken

If native chicken is for eating purpose, then the profit for farmers becomes very important. If no or low profit then farmers don’t want to raise them. Once farmers do not want to raise them, the chicken may disappear from the world very soon. The native chicken slaughtered at about 16 weeks in Taiwan about 10 years ago. Our experiment results (Chou and Hsia, 2006) showed that the feed efficiency would be very bad when we slaughtered at 16 weeks compared with at 12-14 weeks of age. Meat quality, testis size (which price is very high) had no significant difference. These results showed that if native chicken farmers and native chicken want to survive, then they better sell them about 12-14 weeks. The lower feed efficiency means it needs very high cost to produce chicken.

2. Valuable part of native chicken carcass

The best sample is silky chicken. Lin and Chen (2004) found silky chicken has high iron, melatonin and anti-cancer substances. It also can be found some other interesting functional products in other animals, for example whether black skin animals also have the same to able products.

3. Compost dead chicken

Compost dead chicken not only can kill bacteria but also can improve compost quality. This kind compost has high N, due to meat and feathers; high S, due to feathers; high Ca and P, due to bone; and high trace minerals, due to meat bone and other tissues.

4. High temperature treated eggshell

Hatched eggs have a lot of eggshell. If breeding farm size is small then eggshell can be used for compost. If the farm size is big, then the eggshell can be sterilized and used for Ca source (CaCO₃).

5. Eco-balance farm of native chicken

There are three types of eco-balance native chicken farms:

(1) Raise chicken on mesh cage without bedding. This type can reduce coccidiosis problem.
It also can produce high quality of manure, consequence produce good quality of vegetable and fruit.

(2) Raise chicken in a small hut with plenty land for chicken move around. The hut also can be moved one place to another place. The owner can move hut and move to another site after one batch of native chicken. This way to raise native chicken not only can reduce disease problem, but also can improve plant growth rate after raise a batch of chicken. This is due to high nutrient which come from faeces and urine of chicken.

(3) Semi grazing system. The system which chicken raise inside of house when they were young, 4-5 weeks then open gate let them grazing outside under high rise grass. The next batch of chicken will move in 3-4 weeks interval. This method has the following advantages. (a) The outside grazing area can have 8 weeks (3 weeks + 5 weeks young chicken period) empty time. Grass can grow up after last batch of chicken. Grazing area usually not easy disinfectant, the long empty time can block the last batch’s diseases. (b) When chicken old than 5 weeks they can have more space to move around. (c) Chicken can play and avoid heat stress under high rise grass.

6. Feathers and some part of no using carcass after slaughter can have fermentation to make feather meal. This is quite success in Taiwan ROC.

7. Well-cooked viscera of chicken using as a feeds for pigs.

8. Hybrid vigor

When we can breed more than two breeds of native chicken, then we can depend on them to produce a hybrid chicken which not only has good performance resistant to disease or good meat quality but also we can produce a specific brand of chicken which can have commercial value.

Figure 1 Sustainable chicken production
Figure 2  Sustainable raising native chicken for consumption

Figure 3  Relationship between housing and age on the weight, weekly gain and relative gain of male broilers and black-feathered native chickens
Figure 4 Relationship between age and housing on the absolute and relative weight (expressed as % of BW) of the testes of broilers and black-feathered native chickens

References

