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Short communication

Carcase yield and edible component parts of pheasants

(Hasil karkas dan bahagian ternakan kuang yang boleh dimakan)

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Key words: carcase, component parts, pheasants

Abstrak

Dua strain kuang yang diimport iaitu jenis 'ringneck' dan mutan hitam dinilaikan dari segi hasil karkas dan bahagian komponen yang boleh dimakan pada umur penyembelihan 12 dan 14 minggu. Berat bersih kedua-dua strain kuang setelah disiang ialah 74–78% daripada berat hidup dengan nisbah daging:tulang antara 4.2:1 dengan 4.9:1. Jumlah bahagian yang boleh dimakan berjulat antara 77.9% dengan 82.7% daripada berat hidup. Dada, bahagian yang paling berat antara yang boleh dimakan menyumbangkan 29.7–33.1% daripada jumlah berat karkas yang boleh dimakan. Bahagian lain yang boleh dimakan mengikut turutan berat ialah bahagian belakang, peha, drumstick, kepak, leher dan bahagian dalaman yang terdiri daripada hati, jantung, buah pinggang, tembolok kosong dan hempedal. Bagi setiap strain, perbezaan antara umur penyembelihan untuk kesemua parameter yang dikaji kecil dan tidak nyata. Begitu juga, tiada perbezaan yang nyata antara strain pada setiap umur penyembelihan.

Abstract

Two strains of imported pheasants, the ringneck and the black mutant, were evaluated for carcase yield and edible component parts at slaughter ages of 12 and 14 weeks. Both strains yielded dressed weights of 74–78% of liveweight and meat-to-bone ratios of between 4.2 and 4.9. The amount of edible carcase ranged from 77.9% to 82.7% of liveweight. The heaviest edible component part was the breast, accounting for 29.7–33.1% of the total edible weight. Other edible parts in the order of declining weights were the back, the thigh, the drumstick, the wing, the neck and the giblets. Within strain, differences between slaughter ages for all yield factors were small and not significant. Similarly, there were no significant differences between strains at each of the two slaughter ages.

Introduction

Pheasant meat which is known to be very tasty, is considered a delicacy. In recent years, the consumption of pheasant meat in Europe and North America has increased and the meat is now widely available in the market.

In Malaysia, the consumption of pheasant meat is negligible. In fact, it is highly probable that the great majority of Malaysians have not even tasted pheasant meat although many of them have seen the birds, either in bird parks, zoos, pet shops or at relevant government departments.

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The only published reports on the productive performance of pheasants in the country are those of Engku Azahan and Zainab (1991) and Abd. Khalid et al. (1992). These birds were reported to be smaller than kampung chickens of the same age and were just as inefficient in converting feed. Considering these factors as well as the high cost of importing day-old birds, the current cost of producing pheasants in the country would be high, probably in the vicinity of RM20/kg. It would, therefore, be of great interest to know the amount of carcase and edible parts one could expect from these expensive poultry. This paper provides such information.

Materials and methods

A total of 40 pheasants, 20 each from the common ringneck and mutant black strains, were randomly selected from a production trial for evaluation of carcase yield. Ten birds from each strain were slaughtered at the age of 12 weeks while the other 10 were sacrificed at 14 weeks. At each slaughter age and for each strain, the birds comprised equal number of males and females.

Before slaughter, each bird was fasted overnight. The fasted birds were weighed prior to slaughtering which was done by cutting the jugular vein in the neck and draining away the blood. Each slaughtered bird was then dipped in hot water (60 °C) for 60 s followed by manual plucking. The head, feet and shanks were removed and the excess water inside the carcase was allowed to drain off. The abdominal fat was removed and weighed. Next, the contents of the viscera were removed and the eviscerated carcases weighed. The combined weight of the giblets, which comprised the kidney, heart, liver, spleen and empty gizzard, was recorded.

Each eviscerated carcase was then portioned into cuts as breast, wing, drumstick, thigh, back and neck. The weight of each component part was determined. The portions of each carcase were wrapped in aluminium foil and autoclaved at a temperature of 121 °C under a pressure of 15 p.s.i. (1.05 kg/cm^2) for 45 min. The cooked carcase was subsequently deboned to obtain the amounts of meat-plus-skin and bone.

All results were analysed by analysis of variance.

Results and discussion

Both strains of pheasant yielded dressed weights of 74–78% and meat-to-bone ratios of between 4.2 and 4.9 *(Table 1)*. The weights of the edible carcase ranged from 77.9% to 82.7% of liveweight. The heaviest edible component part observed was the breast, contributing 29.7–33.1% of the total edible weight. Other edible parts in the order of declining weights were the back, thigh, drumstick, wing, neck and giblets *(Table 2)*.

Within strain, differences between slaughter ages for all yield factors and edible component parts were small and not significant. Similarly, there were no significant differences between strains at each of the two slaughter ages. Although males were generally heavier than females at each of the two slaughter ages, differences between sexes in each of the measured parameters of carcase yield and component parts were not significant. These results should, however, be viewed with caution and regarded as preliminary considering the relatively small size of the samples used in the study.

The mean dressing percentage and meat-to-bone ratio of pheasants were higher than the respective figures reported for broiler chickens (Engku Azahan 1984), kampung chickens (Engku Azahan et al. 1990a) or ducks (Yeong and Azizah 1989) but were comparable with those of turkeys (Engku Azahan et al. 1990b). Based on an estimated production cost of RM20/kg liveweight, the cost of producing ready-to-cook (eviscerated) carcase would be in excess of RM27/kg. Retail prices would obviously be higher. At these prices, pheasant meat would only be within reach of the most affluent members of the society.

Table 1. Carcase yield of two strains of pheasants at two different ages (means ± SD)

Strain	Liveweight (g)	Dressed weight (%)	Edible part (%)	Meat-to-bone ratio
Ringneck				
A. Male				
12 weeks	1 065.0±46.7	74.7±3.60	78.5±3.71	4.3±0.22
14 weeks	1 125.0±132.3	75.9±0.64	80.0±0.34	4.6±0.30
B. Female				
12 weeks	881.0±85.1	73.6±3.10	77.9±3.19	4.9±0.20
14 weeks	844.0±96.6	77.0±2.53	80.4±1.02	4.4±0.33
Black mutant				
A. Male				
12 weeks	994.0±92.1	75.0±1.93	81.4±5.06	4.2±0.35
14 weeks	956.0±114.3	77.2±0.76	81.7±0.38	4.5±0.60
B. Female				
12 weeks	675.0±25.0	75.5±2.37	80.0±1.87	4.5±0.38
14 weeks	800.0±35.4	78.1±2.77	82.7±2.59	4.4±0.48

Note: at a particular age, differences between strains and sexes in carcase yield were not significant ($p > 0.05$)

Table 2. Edible component parts as proportions of total eviscerated carcase of two strains of pheasants (means ± SD)

Strain	Edible component part (%)						
	Neck	Breast	Back	Wing	Thigh	Drumstick	Giblets
Ringneck							
A. Male							
12 weeks	5.5±0.8	32.1±1.3	16.9±0.9	12.8±2.4	15.0±0.7	12.6±0.9	5.1±0.6
14 weeks	6.1±0.1	33.1±1.9	17.3±0.4	11.2±0.5	13.6±2.0	13.7±1.5	5.0±0.7
B. Female							
12 weeks	5.9±0.6	32.4±1.1	17.1±1.7	11.0±0.3	15.0±0.7	13.0±1.2	5.5±0.2
14 weeks	5.7±0.7	33.1±1.8	17.0±1.6	11.2±0.3	14.7±0.6	12.7±0.6	5.6±0.3
Black mutant							
A. Male							
12 weeks	6.4±0.5	30.9±0.8	16.7±1.4	11.7±0.6	15.4±0.8	13.6±0.4	5.3±1.0
14 weeks	6.0±0.5	30.4±2.3	19.1±2.8	11.9±0.3	14.0±0.7	13.3±0.3	5.3±0.6
B. Female							
12 weeks	5.9±0.4	29.7±2.6	18.1±1.2	12.1±0.9	15.4±0.7	13.1±0.5	5.7±0.7
14 weeks	5.8±0.3	30.7±1.3	18.6±2.5	11.3±0.9	15.1±0.8	13.0±1.4	5.5±0.5

Note: at a particular age, differences between strains and sexes in edible component parts were not significant ($p > 0.05$)

In order to bring this tasty meat to the majority of the populace, there must be local production of day-old pheasants, since the cost of the imported day-olds is currently one of the main cost items in pheasant production.

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