

Effects of Caponization Age on Caponizing Time and Growth Performance in Hinai-jidori Chicken

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INTRODUCTION

Hinai-jidori is a cross between the Hinai-dori (Japanese native chicken) sires and Rhode Island Red dams, and is a slow-growing meat-type chicken. Most Hinai-jidori male chickens have been unused because the meat of males is less fat and tougher than that of females. Caponization improves meat quality in male chickens, but caponization using a Japanese traditional tool at later stages makes time consuming procedure and decreases the body weight of capons for some weeks after caponization. So, we developed a new tool for testectomy and investigated the efficiency with regard to the caponizing time and the growth performance in Hinai-jidori chicken.

MATERIAL AND METHODS

Hinai-jidori chickens were divided into 2-, 4-, 8-wk caponized groups and intact male group (20 birds /group) at 2 wk of age and were raised until 26 wk of age. The testes of the male chicks caponized at 8 wk of age were surgically removed from both sides using a Japanese traditional tool, whereas those of male chicks caponized at 2 and 4 wk of age were surgically removed from only one side using the new tool (Fig.1).

RESULT AND DISCUSSION

Using the traditional method, caponization of an 8-wk-old chick was achieved in 324.6 s, whereas using the new method, caponization of 2- and 4-wk-old chicks was achieved in only 35.9 s and 28.4 s, respectively. Moreover, at 10 and 18 weeks of age, the chicks caponized at 4 wk of age were significantly heavier than the chicks caponized at 8 wk of age. The data suggest that the decrease in the daily weight gain caused by caponization at a younger age was less than that at an older age (Table.1).



Fig.1 Caponizing tool and caponization

Table.1 Effects of caponization age and tool on growth performance in Hinai-jidori chickens

Item	2-week caponized			4-week caponized			8-week caponized			Intact		
Caponizing tool	tool B			tool B			tool A			—		
Caponizing time, s	35.9	±	9.6 ^b	28.4	±	6.7 ^b	324.6	±	57.0 ^a	—		
Body weight, g												
2 wk of age	115	±	11	115	±	11	114	±	11	116	±	11
10 wk of age	1419	±	144 ^{ab}	1547	±	217 ^a	1342	±	162 ^b	1444	±	163 ^{ab}
14 wk of age	2299	±	187	2455	±	293	2229	±	172	2346	±	228
18 wk of age	3052	±	235 ^{ab}	3214	±	244 ^a	2933	±	258 ^b	3146	±	239 ^{ab}
22 wk of age	3615	±	344	3787	±	282	3552	±	285	3753	±	279
26 wk of age	4071	±	279	4175	±	363	3943	±	338	4170	±	291
Weight gain, g/bird/day												
2 to 14 wk of age	26.0	±	2.1	27.9	±	3.5	25.4	±	1.7	26.5	±	2.6
14 to 26 wk of age	21.2	±	3.8	20.5	±	3.5	20.6	±	2.9	22.0	±	2.6

P<0.05

CONCLUSION

We conclude that the early caponization shortens the caponizing time significantly and improves the decrease in the daily weight gain after caponization, thereby enabling efficient capon production from slow-growing meat-type chickens at early stages of development.