本邦に輸入後におけるセイロン野鶏(Gallus lafayettei)の繁殖能力

<table>
<thead>
<tr>
<th>項目</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>誌名</td>
<td>東京農業大学農学集報</td>
</tr>
<tr>
<td>ISSN</td>
<td>03759202</td>
</tr>
<tr>
<td>巻/号</td>
<td>474</td>
</tr>
<tr>
<td>掲載ページ</td>
<td>p. 317-320</td>
</tr>
<tr>
<td>発行年月</td>
<td>2003年3月</td>
</tr>
</tbody>
</table>

農林水産省 農林水産技術会議事務局筑波産学連携支援センター
Tsukuba Business-Academia Cooperation Support Center, Agriculture, Forestry and Fisheries Research Council Secretariat
Reproductive Ability of Ceylon Jungle Fowls (\textit{Gallus lafayettei}) after imported in Japan

By
Takehito KuWAYAMA* and Kenji ICHINOE*

(Received August 22, 2002/ Accepted January 29, 2003)

Summary: Ceylon Jungle Fowls (CJFs) are designated as the national bird of the Republic of Sri Lanka and are strictly protected by the government. The present paper reports the reproductive ability of CJFs after being imported to Japan. The production of the first and second filial generation between CJFs and Gifujidori (\textit{Gallus domesticus}) was successful.

Key Words: Ceylon Jungle Fowl, Reproductive Ability, Gifujidori, Fl, F2
period, getting fertile eggs was difficult.

d) Mating behavior of CJFs

Frequency of mating was very few. Therefore, it was very rare to get a chance to observe. Fortunately, the author observed two times. When a sharp cry was heard from the pen, the author rushed to the pen worrying that something had happened to the fowls. The female fowl was flying inside the pen with a sharp cries, and the male was running on the ground watching the flying female with excitement. As soon as the female come down to the ground, the excited male vigorously mounted the female. Consequently, plenty of feathers were scattered on the ground.

Generally in the pen, the shelter or trees should be prepared to protect the female from injury.

2) Hybrids between CJF and Japanese native chicken (Gallus gallus domesticus).

Hybrids between Jungle Fowls and native chickens have been tried in some countries. In Indonesia, hybrids between Green Jungle Fowl (Gallus varius) males and native females were obtained by artificial insemination for professional purposes. In the Philippines, Red Jungle Fowl (RJF ; Gallus gallus gallus) males were used to obtain hybrids with native females for increasing fighting power.

But no news has been reported on getting hybrids using CJFs artificially. The reason may be that the CJF are strictly protected as the National Bird of Sri Lanka, and native people believe, that if the hybrids between CJFs and native chickens appeared, a curse would surely happen in their family.

Fortunately, the authors got some hybrids (First filial generation) between CJF male and Gifujidori (Japanese Native Chicken ; Gallus gallus domesticus) females and succeeded to rear 4 male and 8 female chickens to be adult birds. The below mentioned characteristics were apparent.

a) Body weight of the hybrids

The body weight was about 1,100±64g in males while females were about 770±40g, at 30 weeks of age, respectively.

The body weights were middle weight between CJF and Gifujidori (CJF < F1 < Gifujidori). The standard body weight of CJF males is 850g and that of CJF females is 580g, while that of Gifujidori males is 1,600g and that of females is 1,200g, respectively.

b) Plumage of the hybrids

The appearance of CJFs, Gifujidori, and the hybrids are shown in Photo. 1 to 6, respectively.

In the plumage of the hybrids, male fowls showed somewhat brighter necks than Gifujidori and had a black lengthwise strip line in the center of each feather.

The breast showed red brown, and the tail showed a purple and greenish gloss never observed in Gifujidori's males.

The female hybrids generally showed brown color of pears. The edge of wings showed black spots. These were also observed in females of CJF.
Reproductive Ability of Ceylon Jungle Fowls (*Gallus lafayettei*) after imported in Japan

Jungle Fowls showed an oblique inclination, while the hybrids showed a bigger size than Jungle Fowls and the edge of the combs was roundish, similar to that of Gifujidori.

d) Crowing pattern

Researches on crowing patterns of Jungle Fowls and those of native chickens were performed by Kuwayama et al. In this report, the crowing pattern of the hybrids was compared with CJFs. The hybrids showed 2 crowing types: one showing a pause between the first and the second syllable followed by 2 to 5 syllables, resembling to CJFs (but CJFs consisted of 3 syllables), and another showing 4 syllables resembling to Gifujidori.

The crowing length: CJF was $1.52 \pm 0.01$ sec, Gifujidori was $2.62 \pm 0.07$ sec, and hybrids was about 1.6 sec, respectively.

3) F2 hybrids

The authors succeeded to produce second filial generations crossing between F1 males and females.

Four males and 2 females of the hybrid were used to
obtain the following characteristics.

a) Body weight
   Body weight of F2 fowls was 1,000±46 g in the male, and 675 g and 725 g in the female.

b) Plumage
   As shown in photo. 7, the F2 males showed almost the same color as that of Gifujidori males, but on the whole, were somewhat more sober than Gifujidori.
   The F2 females showed almost the same plumage as that of CJF females.

c) Comb type
   As shown in photo.8, the F2 males showed almost the same as Gifujidori males, but a slightly yellow trace was observed in the posterior part of the comb. On the whole, it was somewhat thinner than Gifujidori males.

d) Crowing pattern
   Crowing pattern of F2 males showed almost the same pattern as the Gifujidori males but its tone was higher and the tone of 1 syllable was supposed to be decreased.

e) Fertility of the F2 hybrids
   Females of F2 didn’t lay eggs. Crossing between F2 male and Gifujidori females, got several fertile eggs, but all of them stopped development during artificial incubation in an incubator and never hatched.

Lotsy and Kuiper\textsuperscript{3} reported that they could get small type hybrids having the activity to survive. When F1 male was back crossed to the native females, they could find fertility. They could get F2 offsprings, but they were difficult to rear. Similar results were also reported by Deraniyagala\textsuperscript{7}.

The above mentioned experiments were performed on the spot in Sri Lanka, and no report was found of imported fowls in foreign countries, especially in Japan.

This report may serve as reference data concerning the reproductive ability of imported CGFs.

References

6) Lots, J.P. and Kuiper, K. 1922–1924. A preliminary statement of results of Mr. Houkuk’s experiments concerning the origin of some domestic animals. Genetics, 4, 139–172.