

北斗白鵝畜試壹號的選育過程與現況

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鵝群源自 1974 與 1985 年分別自丹麥與美國引進之白羅曼鵝，於 1994 年起至 1999 年止，對該鵝群之產蛋數及體重進行閉鎖族群之選拔。於 2002 年起持續選育高體重品系，至 2007 年已歷經 6 個世代，共計孵出 1,082 隻雛鵝供選拔用。每世代均紀錄鵝隻 8 與 14 週齡體重，並依據種鵝系譜資料，以最佳線性無偏差預測法（Best linear unbiased prediction, BLUP）之動物模式估算其 8 與 14 週齡體重之育種價後，每世代選留 8 週齡體重育種價高者之 25 隻公鵝與 100 隻母鵝為種鵝，繁殖下一世代。結果顯示，至第 6 世代高體重品系公鵝之 8 與 14 週齡體重分別為 4.41 與 5.77 kg，母鵝則分別為 3.95 與 5.04 kg。以第 1 至 6 世代之體重資料估算鵝隻 8 與 14 週齡體重之遺傳率分別為 0.549 與 0.596，兩者之遺傳相關為 0.897。依 BLUP 動物模式估算各世代鵝隻之 8 週齡體重育種價，至第 6 世代者，公與母鵝分別增加 152 與 267.8 g。上開品系已於 2009 年 6 月 16 日通過「北斗白鵝畜試壹號」新品系命名，可供作商業生產肉鵝之父系，其與商業生產場母鵝雜交生產肉鵝，可提升肉鵝之生長性能。

關鍵語：高體重、遺傳率、白羅曼鵝

Breeding Process and Current Situation of Beidou White Goose LRI-1

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The closed White Roman goose flock used for genetic selection was originally imported from Denmark and USA in 1974 and 1985, respectively. Egg production and body weight were selected from 1994 to 1999 by Changhua Animal Propagation Station. In 2002, the flock was selected for heavy body weight until 2007. A total of 6 generations, 1,082 goslings, were hatched and weighted at 8 and 14 weeks of ages. Based on the collected data of body weight and their pedigree, breeding values of body weights at 8 and 14 week-old were estimated with BLUP animal model, thereafter 25 ganders and 100 geese were selected as breeders to reproduce next generation. The results indicated that body weights at 8 and 14 week-old of the ganders were 4.41 and 5.77 kg, respectively, and that of the geese were 3.95 and 5.04 kg, respectively at the 6th generation. The heritabilities of body weights at 8 and 14 week-old were 0.549 and 0.596, respectively, and their genetic correlation was 0.897 from the data of the 1st to 6th generation. The breeding values of body weight at 8 week-old estimated by BLUP animal model in ganders and geese increased by 152 and 267.8 g, respectively, up to the 6th generation. As mentioned above line had passed the designate committee of Beidou White Goose LRI-1 in 2009 by Council of Agriculture, Executive Yuan, Taiwan and used commercially for meat production.

Key Words: Heavy body weight, Heritability, White Roman goose