The study was conducted to assess the reproductive performance and the effect of body weight and age on external egg quality traits of ShikaBrown® (SS-98, SG-98 and SB-98) chickens. Six hundred ShikaBrown® chickens fertile eggs were sourced, incubated and 21 weeks old ShikaBrown® layers were used for studying some external egg quality traits. Data collected were subjected to Analysis of Variance (SAS 9); Univariate was applied to test the effects of age and body weight on external egg quality traits of the birds; where significant differences occurred, the means were separated by Duncan Multiple Range test. The dam (SS-98) parent stock had higher fertility (95.9%) while ShikaBrown® (SB-98) commercial layers had highest hatchability (89.9%).

There was significant effect of age and body weight on all the external egg quality traits (p<0.05) considered in this study except egg shape index, which was not significantly affected (p>0.05) by body weight. The external egg quality traits progressed with corresponding increase in the age and body weight of the ShikaBrown® (SB-98) layers. On the basis of the recorded high values for both reproduction and egg quality traits, the ShikaBrown® parent lines and commercial layers should be made readily available to the commercial poultry farms.

Keywords: Egg, Hatchability, Fertility, External quality traits, ShikaBrown® chicken genotypes (SS-98, SG-98, SB-98).