**Effect of *CCKAR* g.420 C < A SNP on the growth of the Hinai-jidori chicken**

K. Rikimaru 1, D. Aoya 1, Y. Satou 1 and H. Takahashi 2

1 Akita Prefectural Livestock Experiment Station, Daisen 019-1701, Japan, 2 National Institute of Livestock and Grassland Science, Tsukuba 305-0901, Japan

**Introduction:** We previously found the association between a single nucleotide polymorphism (SNP; g.420 C<A) in the *cholecystokinin type A receptor* gene (*CCKAR*) and growth traits in the Hinai-dori which is a breed of chicken native to Japan, and we showed that the A allele had a superior effect on the growth traits compared to the C allele. In the present study, we demonstrated that this SNP improves the growth rate using the commercial Hinai-jidori chicken (a cross between Hinai-dori sires and Rhode Island Red dams) which is a slow-growing Japanese meat type chicken. **Materials & Methods:** Individuals of three the genotypes (A/A, A/C, and C/C) were raised free-range until 23 weeks of age. The body weight, mean daily weight gain, feed intake and feed conversion ratio were examined. Moreover, the shipping weights of Hinai-jidori chickens in the production field were measured.

**Results:** The data showed that the body weight at 23 weeks of age and the average daily gain between 4 and 23 weeks of age of A/A individuals were significantly heavier than those of C/C individuals (*P* < 0.05). There were no significant differences in feed intake among the three genotypes. The feed conversion ratio between 4 and 23 weeks of age in A/A individuals showed lowest value among of the three groups. In the production field too, the shipping weights of A/A individuals were superior to C/C individuals.

**Conclusion:** We conclude that the A allele of the g.420 SNP in *CCKAR* improves the growth rate of the Hinai-jidori chicken.