

Bodin Wongpom 2010: Effect of Thyroglobulin Gene on Marbling Score and Carcass Traits in Kamphaeng Saen Crossbreed Beef Cattle. Master of Science (Animal Breeding), Major Field: Animal Breeding, Department of Animal Science. Thesis Advisor: Mrs. Amonrat Molee, Ph.D. 60 pages.

The aim of the present study was to study the polymorphism single nucleotide polymorphisms (SNPs) of thyroglobulin gene and study the associated between SNPs and marbling score, carcass traits of 336 Kamphaeng Saen crossbreed beef cattle from Suwanvajokkasikit Animal Research and Development Institute (SARDI) with the cattle were mean of body weight  $561.91 \pm 55.11$ .

Sixteen polymorphism of single nucleotide polymorphism; SNPs A110T, A133T, G156C, G161A, C220T, A228G, A253G, C338T, T350G, A351G, T354C, G392A, A430G, T433G, G461A and A506C were observed and all of SNPs have the significant linkage disequilibrium ( $P < 0.01$ ). This study thyroglobulin gene had polymorphism, associated carcass weight, Fat thickness and KPH fat ( $P < 0.05$ ) and not associated marbling score ( $P > 0.05$ ) in Kamphaeng Saen crossbreed beef cattle. Thyroglobulin gene should be developed to use genetic marker for selections carcass traits.

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Thesis Advisor's signature

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