

Halina Sieczkowska, Elżbieta Krzęcio, Katarzyna Antosik,
Andrzej Zybert, Maria Koćwin-Podsiadła,
Stanisław Kamiński, Elżbieta Wójcik

The accordance of RN⁻ phenotype with polymorphism
of PKM2 gene and their relationship with meat quality
values of (Landrace x Yorkshire) x Duroc fatteners

S u m m a r y

The aim of investigations was to analyse the accordance of RN⁻ phenotype with polymorphism of PKM2 gene and their association with meat quality value of porkers (Landrace x Yorkshire) x Duroc. The work was conducted on 82 fatteners. The animals were slaughtered at the Sokołów Meat Plant using an electric stunner and bled lying down. In porkers' group with phenotype RN⁻/?₁, in comparison to animals of free of RN⁻, more intensive glycolytic transformation, expressed by higher acidification of muscle *longissimus lumborum* from 24 to 144 h after slaughtered was found; it was confirmed by lighter colour of meat and by higher drip loss measured since 24 to 144 h *post mortem* as well as by lower technological usefulness of meat. The relationship of genotype PKM2 with certain meat quality traits, as well as with meatiness was found. The animals with TT genotype were characterized by higher lean meat content, more intensive energy transformation, expressed by coefficient R₁ in comparison to the porkers with genotype CT and CC. Effectiveness of genotyping the animals with phenotype RN⁻ on the basis of genotype PKM2 was equal only to 40%. The polymorphism of PKM2 gene can not serve for diagnosis of the raw meat quality as well as its technological suitability. It is not, therefore, the gene, the functional effect of which would be approximate to phenotype RN⁻.