

COMPARATIVE EVALUATION OF LARGE WHITE PIGS AND THEIR CROSSBREEDS MEAT NUTRITIONAL VALUE AND MINERAL CONTENT

Vigilijus Jukna, Vilma Valaitienė, Edita Meškinytė-Kaušilienė, Arūnas Jankauskas
*Laboratory of Meat Characteristic and Quality Assessment, Veterinary Academy, LUHS
Tilžės 18, LT-47181 Kaunas; Lithuania
Phone: (8-37) 36 34 14; E-mail: vjukna@lva.lt; valaitiene@lva.lt; ajankauskas@vet.lt.*

Abstract. The aim of the present study was to examine large white (LW) breed, large white x yorkshire (LWxY) and large white x landrace (LWxL) crossbreeds pork nutritional value and the concentration of essential elements like sodium (Na), magnesium (Mg), calcium (Ca), selenium (Se), copper (Cu), zinc (Zn), iron (Fe) and barium (Ba) with a particular focus on the variability of these trace elements. The parameters of nutritional value (dry matter, proteins, intramuscular fat and total minerals) were determined. The concentrations of sodium, magnesium, calcium, selenium, copper, zinc, iron and barium were determined by inductively coupled plasma mass spectrometry (ICP-MS) after microwave digestion. Various breeds of pigs had different contents of nutritional value and minerals in the longest back muscle. The highest amount of total minerals ($P<0.01$), trace elements of Na, Mg ($P<0.001$) and Ba was established in LWxY pig crossbreed meat. Trace elements of Ca, Zn ($P<0.001$), Se, Cu ($P<0.05$) and Fe were rich in LWxL meat. The highest amount of dry matter, protein and intramuscular fat was in LW pork. However, pork nutritional value and mineral content were affected by pig breed.

Keywords: nutritional value, mineral content, pig breed, crossbreed.