

**Factors affecting meat traits and fertility of pigs in Estonia**

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Local pig breeds have had high fertility during the times. Recently, however, attention has been paid to improving meatiness traits. The aim of this study was to evaluate effect of different factors to meat traits and fertility.

Database was collected from 38 farms during 1998...2001. Backfat thickness and loin eye depth was measured in 26,514 pigs with ultrasonic equipment Piglog-105. The following pig breed combinations were under observation: purebred - Estonian Landrace (EL), Estonian Large White (ELW), Hampshire (H), Pietrain (P) and crossbreds - EL ♂ x ELW ♀, ELW ♂ x EL ♀, P ♂ x H ♀. The following factors were included into general linear model: breed, sex, advisor, season, year, parity, farm.

Purebred P and crossbred P ♂ x H ♀ pigs had significantly higher lean meat percentage (62.59% and 61.69%), compared with other breeds. Purebred H meat traits were almost at the same level as in local breeds. From local breeds was better EL breed with lean meat percentage 59.93%. High lean meat percentage (60.74%) was in ELW ♂ x EL ♀. ELW breed had high fertility (11.27), which did not increase by crossing with EL ♂. P breed had high mortality (1.65) from birth till weaning. Meat traits have not been improved during last years, except loin eye depth. High fertility was in parities 6...8 and lower in 1<sup>st</sup>.

To improve meat traits, P and EL breeds should be used, whereas high mortality rate of P breed must be considered.

**Poster P4.18**

**Meat quality research of pure- and crossbred pigs in Estonia**

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Characteristics of meat quality are becoming more and more important for pork producers and customers. This work was carried out to study the differences between pig breed combinations and their effect on meat quality. All tests were conducted in Valga Meat and Canning Factory, in Meat and Feed Laboratory of the Estonian Agricultural University. Five groups of pigs were under observation - purebred - Estonian Landrace (EL), Estonian Large White (ELW), Finnish Yorkshire (FY) and crossbred - Hampshire ♂ x ELW ♀ (H ♂ x ELW ♀ H/EL/ELW ♂ x EL ♀). 193 pigs were tested.

pH<sub>24</sub> and pH<sub>48</sub> were measured. Chemical composition of meat, dry matter, protein, fat and ash, was determined. Water capacity of meat was determined and cooking loss was found. Loin eye area was measured by planimeter.

The largest loin eye area was in crossbred H/EL/ELW ♂ x EL ♀, smaller in purebred ELW. PSE or DFD meat is very closely related with pH; we have to admit, there wasn't such meat quality complex found. Water binding capacity was the best in crossbred H ♂ x ELW ♀ with value 27.04%, the in purebred FY with 18.36%. Cooking loss was highest in crossbreds of H/EL/ELW ♂ x EL ♀ with 45.67%, the lowest in purebred ELW with 42.98%. Breed had no significant effect on pH and boiling loss. Breed combinations with EL and H had a better meat quality than other breeds.