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Effect of environment and cow genotype on milk quality of black-and-white cattle

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The aim of research was to describe the effect of environment and genotype on milk quality in high yielding cows. Research was performed in the herd of Black-and-White cattle (n=283) yielding ca 10.000 kg of milk per cow during two consecutive years. Model of analysis of variance was used where effects of: genotype (<87.5 or >87.5% of HF blood), the year of testing (1 or 2), feeding season (summer or winter), lactation (1-st, 2-nd or 3-rd), level of daily milk yield (<20.0 kg, 20.1-25.0 or >25.0 kg) on milk yield (305 days) and somatic cells count in milk (SCC) were analysed. Better milk production performance was stated for cows with >87.5% of HF blood when compared to contemporaries with HF blood share <87,5%. Influence of the year was stated (P<0.01) on share of test milkings with low level of SCC (<400.000 cells/ml) in cows with low daily milk yield (<20,0 kg). Group of cows with the lowest daily milk yield showed statistically significant (P<0,01) higher share of milkings with low SCC in the 3-rd lactation when compared to their 1-st lactation.

Poster CSN2.20

Comparative spectroscopy of dried cattle muscles

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Five comparative spectroscopies collecting 6.677 overall points: Fluorescence (F, 310-590nm), Near Infra Red reflectance (NIR, 1308-2393nm), Fourier Transformed Near Infra Red reflectance (FT-NIR, 1000-2500nm), Fourier Transformed Near Infra Red reflectance Microscopy (FT-NIRM, 1250-2500nm), Fourier Transformed Medium Infra Red reflectance (FT-MIR, 2500-25000nm) Spectroscopies were applied to 82 freeze-dried meat samples derived from well distinguished categories of Valdostana cattle (A-Veal, B-Young-cattle, C-Cow). Averages of R^2c results were: 13_{LAB}values multivariate=0.914, F=0.836, NIR=0.654, FT-NIR=0.985, FT-NIRM= 0.792, FT-MIR=0.474. FT-NIR gave better results than 13_{LAB}values in separating all the individuals, while FT-NIRM gave low separation of B vs C samples. F spectroscopy performed well as FT-NIR except for the B vs C classes. The NIR spectroscopy appeared useful, while not so powerful as FT-NIR.