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to GWP. In addition, two genetic indices were related to the GWP: the Economic Health (IES) and the predicted Feed Efficiency (pFE) indices. The simplified equation is a method easily applicable on a farm scale and uses already existing information including herd female fertility and management data. This could represent a useful tool for estimating the impact of milk production of the individual farm, and also for having an overall vision of the impact at a national level, following its evolution over time.

O559

Meat quality assessment of raw meat from two Mediterranean autochthonous pig breeds reared in sustainable conditions

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The sustainability of livestock farming in relation to global anxiety about climate change and the quality of agro-ecosystem services has become a fundamental issue for the world and the scientific community. Many aspects of meat quality are related to genotype, sex, and age of the animals as well as the production system. In Mediterranean countries, farmers in marginal areas engage in environmentally friendly production systems using native genotypes that are well adapted to the environment and are able to exploit the feed resources available on the territory. The black pig breeds are autochthonous in many countries and reared in the interior of the Mediterranean region. Although in Italy, the black pig breeds have been studied and analysed for years, and have been divided in different populations, in Greece, there is a lack of information about the productive performance of black pigs. The current study, funded by the GREEN FUND GREECE no.003141, aimed to evaluate the effect of genotype on the quality parameters, the chemical composition and fatty acid profile on the *Longissisum lumborum* muscle in pig slaughtered at 9 and 12 months of age. For this purpose, 20 piglets were selected from 2 pig farms (1 Greek and 1 Italian) and divided into 4 experimental groups (5 animals per group): E9-Greek breed, slaughtered at the age of 9 months, E12-Greek breed, slaughtered at 12 months of age, I9 Italian breed, slaughtered at 9 months of age, and I12 Italian breed, slaughtered at 12 months of age. Pigs were slaughtered at a licensed abattoir in their country of birth and meat quality analyses were carried out at the University of Bari. The preliminary results show that the E12 meat is less dark with better values of tenderness than I12. The genotype did not influence the chemical composition of 9 months pigs, but on the other hand the I12 have lower protein content and intramuscular fat than E12. As far as the meat fatty acid composition is concerned, the results show a higher percentage of SFA but a lower of MUFA in Italian groups. The concentration of n-3 and n-6 was higher in E9 and E12 than the Italian groups. The meat health indexes were not influenced by genotype but were influenced by age of slaughter. This trial could be a first step to evaluate meat characteristics of Greek black pigs and, therefore, a tool to exploit the diversity of production systems and to raise awareness of the relevance and value of this animal genotype.

O143

Estimating enteric methane emission in dairy cows exploiting longitudinal data measured on single animal and at farm level to refine IPCC equations

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The dairy sector accounts for approximately 30% of GHG emissions of the global livestock sector and for 4% of total anthropogenic GHG emissions. Around 80% of the CH4 emission of the dairy sector originates from enteric methane, a significant source of anthropogenic greenhouse gas production. To achieve the new global methane pledge to tackle climate change and reduce the emission of 30% by 2030, it is necessary to improve the monitoring tools and foster the adoption of mitigation strategies in farm. This study aimed to refine the estimation of the enteric methane emission of dairy farms in Italy by exploiting the longitudinal Dairy Herd Improvement (DHI) and Livestock Environmental Opendata (LEO) project data collected on single animals or at the farm level.

Data on single animals included monthly milk yields and fat and protein composition, while data at the farm level comprised culling and replacement, herds composition by categories, feeding stuff, and diet administered per animal categories and seasons.

Data were collected by the Italian Breeders Association (AIA) in about 9500 Holstein dairy farms throughout Italy, rearing over one million animals. The effect of implementing IPCC/