

# **Book of Abstracts of the 61st Annual Meeting of the European Association for Animal Production**

**Use of some slaughter and quality traits to discriminate rabbit meat from different genotypes reared under organic and conventional systems**

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**Book of abstracts No. 16 (2010)  
Heraklion, Greece  
23-27 August 2010**

**Use of some slaughter and quality traits to discriminate rabbit meat from different genotypes reared under organic and conventional systems**

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The aim of the trial was to identify some quality traits to differentiate rabbit meat from different genotypes reared under different housing systems: organic and conventional. 84 rabbits of local population (Group A) were housed in colony cages under organic system, according to an official organ of certification; 72 rabbits of the same population (Group B) and 72 hybrids (Group C) were housed in colony cages under conventional system. All rabbits were fed an organic diet ad libitum. At a weight of  $2,400 \pm 100$  g but at different ages (local population 102 days old; hybrids 90 days old) 30 animals of each group were slaughtered. Slaughter data, chilled carcass composition, reference carcass characteristics and meat quality traits were collected and statistically processed by stepwise discriminant analysis. Among investigated parameters live weight, drip loss, loin, muscle/bone, b\* and L\* colour traits were selected as predictors. The selected parameters allowed to differentiate the three groups and a total of 94%, 58% and 100% rabbits were correctly assigned to their original group. The selected parameters were analyzed by ANOVA and drip loss, loin, muscle/bone and L\* showed the highest significant differences between groups. Drip loss was higher in Group A than in the other groups (37.6 g vs 30.8 g and 29.22 g,  $P < 0.05$ ). Loins of Groups A and B were higher than in Group C (22.8% and 21.5% vs 21.0%,  $P < 0.01$ ). Muscle/bone was better in Group C (4.66 vs 4.01 and 3.49,  $P < 0.01$ ). C and B Groups showed higher L\* than Group A (61.89 and 59.15 vs 53.94,  $P < 0.01$ ). In conclusion the best accuracy of classification was in the classes characterized by local population reared under organic system and hybrid reared under conventional system. Some quality parameters could be considered efficient to discriminate rabbits from the different genotype and rearing systems and to improve the traceability process.

**Long term economic consideration of progeny testing program in Iranian Holsteins**

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Cost-benefit ratio was demonstrated for young bulls sampling program in Holsteins of Iran. Returns from progeny testing program was divided into two groups, one from genetic improvement in different selection pathways and the other from culled bulls after progeny testing or at the end of reproductive period. The most important part of expenses was food and maintenance costs of young bulls during quarantine and waiting period. All costs and returns were discounted to their happening time. Interest rate was 8 and 6 percent for costs and returns, respectively. Gene flow theory was used for calculating cost-benefit ratio in a continuous selection program for 70 years. Cumulated cost-benefit ratio was 1.95 in year 70. This value was not the optimum value and could change by change in some management parameters like number of sampled young bulls or number of daughters per young bulls. Late onset of positive profit (year 23) was a result of large number of sex-age classes especially in dam pathways.

**ISBN 978-90-8686-152-1**  
**e-ISBN: 978-90-8686-708-0**  
**DOI: 10.3920/978-90-8686-708-0**

**ISSN 1382-6077**

**First published, 2010**

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**The Netherlands, 2010**

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6700 AE Wageningen  
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