Animal Genetics

Animal Nutrition

Animal Management and Health

Animal Physiology

Livestock Farming Systems

Cattle Production

Sheep and Goat Production

Pig Production

Horse Production

This Book of Abstracts is the main publication of the 59th Annual Meeting of the European Association for Animal Production (EAAP) held in Vilnius, Lithuania, on 24-27 August, 2008. It contains abstracts of the invited papers and contributed presentations. The meeting addressed subjects relating to science and innovation, with the main theme "Efficient and environmentally friendly livestock farming".

Also, important problems were discussed during the sessions of EAAP's nine Commissions: Animal Genetics, Animal Nutrition, Animal Management and Health, Animal Physiology, Cattle Production, Sheep and Goat Production, Pig Production, Horse Production and Livestock Farming Systems. In addition joint sessions on topics interesting several disciplines and species were included in the programme. A total of 1512 authors (580 abstracts) contributed to this publication.

ISBN 978-90-8686-074-6
ISSN 1382-6077

Wageningen Academic Publishers

Book of Abstracts, EAAP – 59th Annual Meeting, Vilnius, 24-27 August 2008

Book of Abstracts of the 59th Annual Meeting of the European Association for Animal Production

EAAP • EVT • FEZ • EUROPA • 2008 • VILNIUS • LITHUANIA • 59

Book of abstracts No. 14 (2008)
Vilnius, Lithuania
24-27 August 2008

ISBN 978-90-8686-074-6
ISSN 1382-6077

First published, 2008

Wageningen Academic Publishers
The Netherlands, 2008

Adipose cellularity but not lamb growth is affected by Vitamin A supplementation during early post-natal development

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Growth parameters, carcass and Longisimus dorsi area and lipid content, size and number of adipocytes in three adipose depots (omental, perirenal and subcutaneous) were studied. Twenty-four male Rasa Aragonesa lambs were assigned to two groups: Control, receiving only the vitamin A of the feeds and Vitamin A, receiving a supplement of 500,000 IU/animal twice a week. The effect of the Vitamin A was studied at two moments of the lamb development: 58 ± 0.7 and 101 ± 6.5 days of age. Results at the two experimental periods showed that there were no significant differences between both groups (Control and Vitamin A) on growth, carcass and Longissimus dorsi area and lipid content but it was observed that the lambs supplemented with vitamin A had a bigger number of adipocytes in the perirenal depot ($P < 0.05$) and smaller adipocytes in the omental and perirenal depots ($P = 0.06$) when the animals had 100 days of age, suggesting that hyperplasia and hypertrophy processes were affected on the different adipose depots depending on their degree of maturity.

Effects on survival at birth in meat sheep breeds

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Lamb survival is the crucial factor influencing sheep productivity. The purpose of this study was to analyze the influence of sex, litter size, parity and lambing difficulty on survival at birth (SB) in Danish Texel, Shropshire, Oxford Down and Suffolk. Data used in the analyzes were collected from 1992 to 2006 by the Danish Agricultural Advisory Service. Survival at birth was recorded within 24 hours after birth. Analyzes of variance were carried out using SAS glimmix macro with logistic models. The total frequency of SB was 88.3%, 91.6%, 91.6% and 92.4% for Shropshire, Oxford Down, Suffolk and Texel, respectively. There was a curvilinear relationship between SB and birth weight. Female lambs had significantly higher incidence of SB ($p<0.05$) compare to male lambs in all studied breeds. Surprisingly, twin-born Texel lambs had significantly higher SB compare to singletons and triplets. The mean SB of triplets was significantly lower ($p<0.001$) than for twins in Texel and Suffolk. Survival at birth was significantly higher ($p<0.001$) in lambs born without difficulty in all analyzed breeds. Lambs from ewes in first parity had the lowest survival rate, especially when their birth weight was higher than average.

Effects of feeding system on the carcass and meat fat depots in Churra Tensina light lambs raised on Spanish dry mountain areas.

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Forty-eight single male of Churra Tensina light lambs were used to evaluate the effect of four feeding systems on carcass characteristics and fat depots. The treatments were: GR, lambs and ewes were continuously grazing and were unweaned; GR+S, as the previous one, but lambs had free access to concentrate; DRL-GRE, had free access to concentrate fed and ewes grazed during 8 h/day, thereafter remaining indoors with lambs; DRL, lambs and ewes were always kept in confinement with free access to concentrate. In DRL-GRE and DRL lambs were weaned at 45 days old. The lambs were slaughter when reached 22-24 kg. Abdominal fat weight (mesenteric and omental) was recorded and 24 h post-refrigeration cold carcass, renal and pelvic fats (previously removed) were weighted. Both intermuscular and subcutaneous fats were obtained through dissection. The intramuscular fat was determined by chemical analysis. GR lambs presented lower growth rates, age, carcass weight and dressing percentage than the rest of treatments. Feeding system affected all fat depots ($p<0.01$) except pelvic, renal and intramuscular fats ($p>0.05$). GR presented the lowest amount of total body fat, being the subcutaneous fat the most reduced fat depot. Carcasses from grazing systems are in accordance to the consumer demand.

Interrelationships among predictors of lamb carcasses composition

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The objective of this study was to identify a reduced set of variables from an original data set of 18 carcass measurements in order to avoid redundancy, collinearity problems, and to simplify the development of models to predict lambs carcass composition. One hundred and twenty-six lambs, 86 males and 40 females, of Churra Galega Bragançana Portuguese local breed were slaughtered, and carcasses were weighed (HCW) approximately 30 min after exsanguination. After cooling at 4ºC for 24 h a set of seventeen carcass measurements were recorded, and data interrelationships were analysed following the common factor analysis procedure. All variables were highly and positively correlated with HCW ($r > 0.46$), being especially high in the carcass dimensions measurements ($r > 0.75$). Subcutaneous fat thickness measurements were highly and positively correlated ($r > 0.58$) with breast bone tissues thickness measurements. Three common factors (factor I = carcass weight; factor II = subcutaneous fat thickness; factor III = breast bone tissues thickness) were retained, and accounted for 83.5% of the variation in the original variables. This study demonstrates that common factors analysis can be used to condense the information given by large sets of variables, allowing selecting a reduced number of variables, which contributes to reduce collinearity problems, and to simplify the development of models to predict lamb carcass composition.