

INFLUENCE OF STARCH ADDING ON THE BEEF COMPOSITIONS VISCOSITY

INFLUENȚA ADĂUGĂRII AMIDONULUI ASUPRA VÂSCOZITĂȚII COMPOZIȚIILOR DIN CARNE DE VITĂ

DANIELA IANIȚCHI, LUCICA NISTOR, LAURA URDEȘ, CAMELIA HODOȘAN , CRISTIANA
DIACONESCU

*Faculty of Animal Sciences, Bucharest, Romania
dianitchi@yahoo.com*

Animal raw material processing is directly influenced by the physical and chemical characteristics of their. The various combinations and status of the raw materials used in the food industry determine specific behaviours that may influence the processing equipment performance and construction. The study on meat composition viscosity depending upon the added components, temperature and mixing time length, has shown that viscosity is increasing with lower mixing temperature , higher mixing time length and higher added starch percentage.

Keywords: beef composition, viscosity, starch

THE INFLUENCE OF FEED PROTEIN LEVEL ON PRODUCTIVE PERFORMANCES AT ROSS 308 HYBRID

INFLUENȚA NIVELULUI PROTEIC AL RAȚIEI ASUPRA PERFORMANȚELOR PRODUCTIVE LA HIBRIDUL ROSS 308

ADELA MARCU¹, I. VĂCARU-OPRIȘ², A. MARCU³, CORNELIA VINTILĂ¹,
D. DRONCA¹

¹*U.S.A.M.V.B Faculty of Animal Sciences and Biotechnologies Timisoara, România*

²*U.S.A.M.V.I., Faculty of Animal Sciences Iași, România*

³*S.C LUCKY VET SRL Timișoara, România*

Few years ago our country start breeding broiler hybrids due to the high growing performances. In our experiment the influence of protein ration level on growing performances and slaughter yield hybrid Ross 308, were performed. The two experimental lots were keeping in optimum microclimate condition in unprotected cage, on soil on permanent layer and having different protein level ration. For obtaining the information regarding the average gain the chicken were weighing weekly and the feed quantity ingested were periodical weighing. The L1 group received a high protein level ration content compared with L2 group. During the all experiment period the highest weighing gain on group L1, were observed. At the end of the experiment the average gain for the chicken from L1 group were 2555,2 g with a feed conversion of 1,96 kg feed / kg gain and for L2 group were 2099,6g with a feed conversion of 2,14 kg feed / kg gain. The highest slaughter yield values (69, 67 % at warm and 65,6 % after 24 h of refrigeration) for the group L1, were observed.

Keywords: feed conversion, average gain, slaughter yield

THE INFLUENCE OF FEED PROTEIN AND ENERGY LEVEL ON MEAT CHEMICAL COMPOSITION FROM DIFFERENT ANATOMICAL REGIONS AT “Cobb 500” HYBRID

INFLUENȚA NIVELULUI PROTEIC ȘI ENERGETIC AL RAȚIEI ASUPRA COMPOZIȚIEI CHIMICE A CĂRNII DIN REGIUNI ANATOMICE DIFERITE LA HIBRIDUL “Cobb 500”

ADELA MARCU¹, I. VĂCARU-OPRIȘ², A. MARCU³

¹U.S.A.M.V.B Faculty of Animal Sciences and Biotechnologies Timisoara, România

²U.S.A.M.V.I., Faculty of Animal Sciences Iași, România

³S.C LUCKY VET SRL Timișoara, România

In order to increase quantity and quality of white meat, breeders are orienting to exploitation of hybrids with distinguished growing and slaughtering performances. In this experiment was followed the influence of protein level on meat chemical composition in different anatomic parts at Coob 500 hen commercial hybrid for meat. Breeding system for the two lots was on soil. For each phase, was assured optimal breeding condition according to the recommendations from Broiler Management Guid Coob 500-2008. L₁ had a feed with a protein and energy level higher then L₂. After slaughtering, meat was sampled from three different corporal regions (chest, thigh and drumstick) and was analyzed water, protein and fats content at each sample. The results have showed that in chest muscles water and protein are in a higher percent and fat proportion is lower compared to haunch muscles. Comparing the two experimental lots can be seen obvious differences of water and protein in favour of lot 1. Fats content, at all kinds of muscles was in a high proportion to L₂ in comparison with L₁.

Keywords: chemical composition, chest muscles, thigh, drumstick

RESEARCHES REGARDING BACTERIOLOGIC AND MYCOLOGIC POLUANT LEVEL OF COW MILK, ON TECHNOLOGICAL FLOW

CERCETĂRI PRIVIND NIVELUL POLUATOR BACTERIOLOGIC ȘI MICOLOGIC AL LAPTELUI DE VACĂ, PE FLUX TEHNOLOGIC

O. NEGREA, ADRIANA CRISTE, CAMELIA RADUCU, VIOARA MIREȘAN, Z. MARCHIȘ

Summary: Researches done on a B.R. 64 milking cows live stock, regarding microbiological charge of cow milk and pollutant sources on technological flow,. Samples were taken in sterile test tubes, to study the microbial charge level from: milking empty canteen; gauze used for udder hygiene; first milking milk jets from the four quarters; total milking milk on lots; water used for mammary gland hygiene; after the first and after the last milking animal; cooling tank (milking milk on total /live stock). Laboratory analysis regarding microflora charge level of samples, evidence enough large variations regarding microbial charge level in samples collected.

Keywords: cow, milk, qualiti, microbial charge level,

THE INDICATOR MICROORGANISMS VALUE IN RELATION TO PRIMARY CONTAMINATION OF HONEY DETERMINAREA MICROORGANIMELOR CA INDICATOR AL CONTAMINĂRII MIERII

MIROSLAVA KAČÁNIOVÁ¹, M. MELICH¹, VLADIMÍRA KŇAZOVICKÁ¹,
P. HAŠČÍK², JANKA SUDZINOVÁ³, SIMONA PAVLIČOVÁ⁴, J. ČUBOŇ²

¹Department of Microbiology, ² Department of Evaluation and Porcessing of Animal Products, ⁴Department of Food Hygiene and Safety, Faculty of Biotechnology and Food Science, Slovak University of Agriculture, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia

³ Animal Production Research Centre Nitra, Hlohvecká 2, 951 41 Lužianky, Slovakia
Corresponding author: e-mail: Miroslava.Kacaniova@uniag.sk

The aim of this work was to study and characterize the microbial transit among the honey-bee gastrointestinal tract microflora and bee hive environment, that are the primary sources for the honey microbial community. Therefore, an exhaustive microbial analysis in honey, adult honey-bee gastrointestinal tract, and bee hive environment from different Slovakian regions, was conducted. Our microbial screening revealed that the primary sources of microbial community present in Slovakian honey are the bee hive environment and the honey-bees digestive tract microflora, mainly due microorganisms normally present in dust, air and flowers. We found that the digestive tract of Slovakian adult honey-bees is highly populated by anaerobic, rather than aerobic bacteria, where coliforms, enterococci, staphylococci, Bacillus sp., Pseudomonas sp., microscopic fungi and yeast were found. The bee hive environment revealed the presence of microscopic fungi. Among these, the most representative genera were Aspergillus, Cladosporium and Penicillium. The counts of total anaerobes, total aerobes, coliforms, enterococci, bacilli, microscopic fungi and yeast were monitored in honeys. The most frequently microscopical fungi belonging only to genera Penicillium, Cladosporium and Alternaria were found.

Keywords: honey; bee hive environment; gastrointestinal tract of bees; microorganisms

THE ANTIMICROBIAL ACTIVITY OF HONEY AND PROPOLIS AGAINST YEASTS CANDIDA SPECIES

ACTIVITATEA ANTIMICROBIANĂ A MIERII ȘI PROPOLISULUI FAȚĂ DE SPECIILE DE DROJDII CANDIDA

MIROSLAVA KAČÁNIOVÁ, M.MELICH, VLADIMÍRA KŇAZOVICKÁ, SOŇA FELŠÖCIOVÁ,
JANKA SUDZINOVÁ¹

Department of Microbiology, Faculty of Biotechnology and Food Science, Slovak University of Agriculture, Tr. A. Hlinku 2, 949 76 Nitra, Slovakia

¹ Animal Production Research Centre Nitra, Hlohovecká 2, 951 41 Lužianky, Slovak Republic, e-mail:
Miroslava.Kacaniova@uniag.sk

The aim of this study was to focus on the evaluation of the antimicrobial activity of honey samples and ethanolic extract of propolis (EEP) against Candida species. The honey concentrations - 50 % and 25 % of honey in distilled water were prepared. These preparations were tested for antimicrobial activity against five different types of yeasts: Candida crusei, Candida albicans, Candida (Torulopsis) glabrata, Candida parapsilosis and Candida tropicalis. The disc diffusion method using filter paper discs was employed. The antimicrobial activity was determined as an equivalent of the inhibition zones diameters (in millimeters) after incubation of the cultures for 48 hours. There were not seen an inhibition zones against the yeasts investigated in the 25 % and 50 % concentration of honey samples. The analysis among the tested yeasts showed that Candida crusei was the most sensitive in 70 % of EEP, and the sensitivity of the yeasts decreased in the order: Candida albicans > Candida parapsilosis > Candida tropicalis > Candida glabrata.

Keywords: honey; antifungal action; Candida species, diffusion method

STUDIES ON THE RESISTANCE TO WINTERING OF THE ITALIAN BEES *APIS MELLIFERA LIGUSTICA* REARED IN ROMANIA

STUDII PRIVIND REZISTENȚA LA IERNARE A ALBINEI ITALIENE *APIS MELLIFERA LIGUSTICA* CRESCUTĂ ÎN ROMÂNIA

MONICA PÂRVU¹, CORINA AURELIA ZUGRAVU², IOANA CRISTINA ANDRONIE¹,
CARMEN BERGHEȘ¹, IUDITH IPATE³

¹University Spiru Haret, FMV, Bucharest, monica_parvu@yahoo.com;

²University of Medicine and Pharmacy „Carol Davila”, Bucharest

³ Centrul de Studii și Cercetări pentru Biodiversitate Agrosilvică –Academia David Davidescu

*The study was conducted on bee families of *Apis mellifera carpatica* and *Apis mellifera ligustica* breeds. The bees were housed in multi-storey hives. The experimental period was of 6 months. The resistance to wintering was evaluated on the basis of several apicultural indicators: mortality, feed intake during the winter, general state of the family. Mortality was 35% during wintering for the Carpathian bee and 52% for the Italian bee. The differences were very significant ($p \leq 0.001$). When wintering finished all bee families were in good strength. The general state of the bee family was as follows: the Carpathian bee had a strong family when wintering started and ended with a median power; it had a large number of young bees and sufficient reserves; no diarrhoea or mould were noticed; relative humidity was 74%. The Italian bee had a strong family when wintering started and ended with half of the power because of the high mortality during the winter; no diarrhoea or mould were noticed; relative humidity was 69%.*

Keywords: *apis mellifera ligustica*, resistance of wintering

RESEARCHES REGARDING THE MINERAL TRACE CONTENT OF SOME HONEY TYPES HARVESTED FROM SOUTHERN ROMANIA DURING 2007 AND 2008

CERCETĂRI PRIVIND CONȚINUTUL ÎN MINERALE AL UNOR SORTURI DE MIERE PROVENITE DIN REGIUNEA OLTENIA ÎN PERIOADA 2007- 2008

SILVIA PĂTRUICĂ¹, MONICA HĂRMĂNESCU², A JIVAN³, C. CIOABĂ¹, ELIZA SIMIZ¹, C.
D. CĂLAMAR¹.

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, România, patruica_silvia@yahoo.com

²Faculty of Agro-Food Tehnology and Processing, Timișoara, România

³Faculty of Agriculture, Timișoara, România

*In this paperwork are presented data on the trace mineral content of *Robinia pseudacacia*, lime, sun flower and polyflower honey collected from various areas of southern region. Analyzes regarding the trace mineral content were carried out from 14th to 30th of February 2009 in the atomic and molecular spectroscopy laboratory at the Faculty of Agro-alimentary Products, USAMVB Timisoara, by atomic absorption in flame by spectrometer Contr AA 300 with continuous source. There were analyzed 12 samples of honey from 4 honey types (acacia, lime, sun flower and polyflower) harvested in 2007 and 2008 from three departments: Dolj, Mehedinți and Gorj. It was established the ash, Na, K, Mg, Cu, Zn, Mn, Fe, Pb, Co, Cr content.*

Keywords: honey types, trace mineral content.

COMPARATIVE STUDY REGARDING THE QUANTITY OF ACACIA AND LIME HONEY HARVESTED IN 2008 IN VARIOUS TYPES OF BEEHIVES

STUDIUL COMPARATIV PRIVIND PRODUCȚIA DE MIERE DE SALCÂM ȘI TEI OBTINUTĂ ÎN ANUL 2008 ÎN DIFERITE TIPURI DE STUPI

SILVIA PĂTRUICĂ¹, D. URSULESCU¹, M. BURA¹, ELIZA SIMIZ¹, I. BĂNĂȚEAN DUNEA², C. CĂLAMAR¹.

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, România, patruica_silvia@yahoo.com

²Faculty of Agriculture, Timișoara, România

the paperwork present the results of a comparative study regarding the production of acacia (Robinia pseudacacia) and lime honey harvested in 2008 in flat, vertical and multi-frame hives. A total of 45 bee families (Apis mellifica carpatica, Banatica ecotipe), divided in three experimental groups, with 15 families on each hive, were examined for every type of hive. During the experiment there were tracked the number of honeycombs with larvae starting from 7th to 10th of April and from 1st to 5th of May, the acacia and lime honey yield.

Keywords: bees, honey yield, types of beehive

RESEARCH ABOUT THE INFLUENCE OF ORGANIC SELENIUM ON THE GROWTH PERFORMANCES OF THE COMMON CARP (CYPRINUS CARPIO), LAUSITZ VARIETY, JUVENILES

CERCETĂRI PRIVIND INFLUENȚA SELENIULUI ORGANIC ASUPRA UNOR INDICI DE CREȘTERE LA PUIETUL DE CRAP (CYPRINUS CARPIO), VARIETATEA LAUSITZ

ALINA RODICA ANI, A. ȘARA, M. BENȚEA, A. BARBU

University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, 3-5 Manastur Street, 400372 Cluj-Napoca, Romania, anialina2003@yahoo.com

The present research concerns the use of organic selenium (Se) in the nutrition of the common carp (Cyprinus carpio), variety Lausitz, during its sapling stage. The experimental work was carried out during 159 days in the Martinesti Fish Farm, near the city of Cluj-Napoca, Romania. The total number of carp juveniles was organized in two batches: the experimental batch and the witness batch. Each group consists of 200 juveniles having a mean individual weight of 1.5 g. The rearing conditions were similar for the both groups, excepting the alimentation. The experimental batch received 0.03 mg organic Se (Sel-plex) per kg of food. At the end of the experiment these juveniles reached an average weight of 354.619±0,088 g/specimen and a rate of survival of 99%, while the juveniles from the witness batch registered an average weight of 276.804±0,051 g/specimen and a rate of survival of 97%. The results reveal that the use of organic Se (Sel-plex) in the nutrition of the common carp juveniles (Cyprinus carpio), variety Lausitz, leads to an increased body mass and to a lower mortality.

Keywords: organic selenium, nourishment, body mass, carp sapling

INFLUENȚA UNOR BIOADITIVI FURAJERI ASUPRA INDICILOR DE CREȘTERE LA PĂSTRĂVUL FÂNTÂNEL (*SALVELINUS FONTINALIS M.*)

THE EFFECTS OF SOME FODDER BIOADDITIVES ON THE PRODUCTION PERFORMANCES OF BROOK TROUT (*SALVELINUS FONTINALIS M.*)

A. BARBU, A. ȘARA, M. BENȚEA, ANI ALINA

University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, 3-5 Manastur Street, 400372 Cluj-Napoca, Romania
bcaurelian@gmail.com

The aim of this study was to follow the effects of Bio-Mos, NuPro and Sel-Plex on the production indices (the average body weight, SR, GR, FCR, total biomass and the survival percentage) of brook trout. The experiment was carried out during 21.August – 04.December 2008 at the trout farm ICAS Gilau, situated in Cluj County. Four batches were implied: a Control batch and three experimental batches (Bio-Mos 0.2 %, NuPro 2 % and Sel-Plex 0.03 %) each of them consisting of 250 brook trout juveniles. The experiment took place in four concrete tanks which offered the same rearing conditions (the same water quality, rearing density, feeding hours, food quantity). The experimental batches received 0.2 % Bio-Mos, 0.03% Sel-Plex and 2% NuPro, and at the end fish reached an average weight of 104.25 g/specimen and a survival rate of 91.6% for Bio-Mos batch, 93.55 g/specimen and a survival rate of 94.4% for Sel-Plex batch and 94.1 g/specimen and a survival rate of 89.2% for the NuPro batch comparatively to the Control batch where an average weight of 93.5 g/specimen and a survival rate of 86.8% were registered.

Keywords: Bio-Mos, NuPro, Sel-Plex, *Salvelinus fontinalis M.*, production indeces

RESEARCH REGARDING THE EVOLUTION OF CORPORAL WEIGHTES AND FOOD CONVERSSION ON JUVENILE OF SIBERIAN STURGEON (*Acipenser baeri*)

RAISED IN RECIRCULATING SYSTEM

CERCETĂRI PRIVIND EVOLUȚIA MASEI CORPORALE ȘI A CONVERSIEI HRANEI LA PUIETUL DE STURION SIBERIAN (*Acipenser baeri*) CRESCUT ÎN SISTEM RECIRCULANT

M. BURA, Z.T. SZELEI, A. GROZEA, R. MUSCALU-NAGY, I. BĂNĂȚEAN-DUNEA, SILVIA PĂTRUICĂ

Faculty of Animal Sciences and Biotechnologies, Timisoara, Romania

*The research was performed within the recirculating aquaculture system for sturgeon growth, in Banat's University of Agricultural Sciences and Veterinary Medicine from Timisoara, on 2851 juveniles of Siberian sturgeons (*Acipenser baeri*), aged between 132-175 days. Juveniles were maintained in 4 tanks with volume of 5.63 m³, fed with granulated feed of 2 mm (44 & 22% PB and GB). Every 2 weeks the weight and body length was determinate on an effective of 30 individuals from each tank. Based on the obtained body weight, it has been established the food quantity used and bioproductive indicators. Having the weight differences between the individuals of a Siberian sturgeon population, it is needed at certain time intervals to practice assortment by body development. At the age of 175 days, Siberian sturgeons reached an average body weight between 90.13 ± 4.56 g and 197.63 ± 7.22 g and average body length between 28.73 ± 0.43 cm and 37.55 ± 0.38 cm. Individual values of minimum and maximum body weight varied between 32 g and 307 g and body length between 24.5 cm and 42 cm. For the entire population of Siberian sturgeons, there is a middle and high variability for the average body weight and a small variability for the average body length. During the 43 experimental days, the 2851 Siberian sturgeons have acquired a real weight gain of 184.66 kg, with a conversion factor of 0.84 kilograms of feed / kg growth and an index of feed conversion of 1.19 kilograms spore / kg feed consumed.*

Keywords: *Acipenser baeri*, recirculating system, body weight, feed conversion.

PHYSICO-CHEMICAL LIMITATIVE FACTORS FOR GROWTH AND DEVELOPMENT IN STERLET (*ACIPENSER RUTHENUS* LINNAEUS, 1758) IN EXTENSIVELY SYSTEM

FACTORII FIZICO-CHIMICI LIMITATIVI PENTRU CRESTEREA ȘI DEZVOLTAREA LA CEGĂ (*ACIPENSER RUTHENUS*, LINNAEUS, 1758) ÎN SISTEM EXTENSIV

R. C. DIMA², N. PATRICHE¹, MARILENA TALPEȘ¹,
MAGDALENA TENCIU¹, DESIMIRA MARIA DICU¹

²National Agency for Fishery and Aquaculture, npatriche@xnet.ro

¹Institute of Research and Development for Aquatic Ecology, Fishing and Aquaculture Galați, România,
icdeapa@icdeapa.ro

*The oldest and most common method of increasing fish is a fish breeding ponds in which the supervision of nutrition and growth of biological material. Sterlet (*Acipenser ruthenus ruthenus* Linnaeus 1785) is the 4th of sturgeon scale and economic importance as a share of production of these fish. Monitoring of physico-chemical parameters of sturgeons ponds has a crucial role to obtain satisfactory yields both in qualitative and quantitative. Chemical characteristics of water were determined in laboratory ecosystems Chemistry of the Institute of Research and Development for Ecology Aquaculture, Fisheries and Aquaculture Galați for the samples have been taken of the total water. Determination of the chemical characteristics was performed by standardized methods. Physic-chemical parameters of water were determined according to norm on the classification of surface water quality in order to establish the ecological status of water (Order no. 161/2006), for Class II of quality*

Keywords: aquaculture, pond, sturgeons, sterlet.

COMPARATIVE STUDY ON THE HORMONAL STIMULATION STERLET (*ACIPENSER RUTHENUS*, LINNAEUS, 1758) USING CARP HYPOPHYSIS AND ARTIFICIAL HORMONE TYPE NERESTIN 5-5A

STUDIUL COMPARATIV PRIVIND STIMULAREA HORMONALA LA CEGA (*ACIPENSER RUTHENUS* LINNAEUS, 1758) UTILIZÂND HIPOFIZĂ DE CRAP ȘI HORMON ARTIFICIAL TIP NERESTIN 5-5A

R. C. DIMA², N. PATRICHE¹, MARILENA TALPEȘ¹,
MAGDALENA TENCIU¹, DESIMIRA MARIA DICU¹

²National Agency for Fishery and Aquaculture, npatriche@xnet.ro

¹Institute of Research and Development for Aquatic Ecology, Fishing and Aquaculture Galați, România,
icdeapa@icdeapa.ro

Starting from the particular sturgeon reproductive biology, propagation of technology through artificial comprises a number of phases required including: selection, parking broodstocks cell maturation and sexual stimulation in order fertilized their conditions provided. To stimulate the process of sexual maturation of the sexual elements for sterlet could be hypophysis and also analogue gonadotropic hormone type Nerestin 5. Literature attesting to the use of sterlet dry hypophysis treated with acetone (Maria Caloianu-Iordăchel, 1973) and employing successful hormone analogue found as LHRHa (N.Patrichi and collaborators, 1989-unpublished data). Advantages and disadvantages of using hypophysis or gonadotropic hormone analogue fdhgghNerestin 5 are very important and decisive for modern aquaculture the century XXI century

Keywords: starlet, NERESTIN, sexual maturation

EVALUATION OF ETHINYLESTRADIOL (EE₂) EFFECT ON EMBRYO DEVELOPMENT IN COMMON CARP (CYPRINUS CARPIO)

EVALUAREA EFECTULUI ETINILESTRADIOLULUI (EE₂) ASUPRA DEZVOLTĂRII EMBRIONARE LA CRAPUL COMUN (CYPRINUS CARPIO)

GABI DUMITRESCU, LILIANA PETCULESCU-CIOCHINA, S. VOIA, A. GROZEA, D. DRONCA, IULIANA CRETESCU, LILIANA BOCA

Faculty of Animal Sciences and Biotechnologies, Timisoara, România

Worldwide, the scientific researches performed during the last years are focused on the determination of the negative effects caused by natural and antropogeneous chemical compounds on aquatic species; these species are more exposed to most pollutants than the land species, for the simple reason that the aquatic environment is the last destination for most residues. Our research team proposed to test the toxic effect caused by ethinylestradiol on embryo development in common carp (Cyprinus carpio). Common carp embryos were purchased from the fish farm S.C. Acva Prod S.R.L. Cefa, Bihor County these were obtained by artificial reproduction. After taking and selection, the fecundated spawns were introduced in 10 Nunk culture plates of 45 ml, where we introduced 40 ml water, too. We created 3 batches, with two replications, namely: batch 1 – control, batch 2 – in water, we added ethinylestradiol (EE₂) in concentration of 1.5 ng L⁻¹ and batch 3 – we added in water a concentration of 7 ng L⁻¹ EE₂. During the incubation, the Nunk plates were kept in breeding aquariums, at a temperature of 24°C. Successive to the supervision of embryos in batch 3, 48 hours post-fecundation, we could observe evolution stagnations, 70% of them being in the stage of 40 somites of the segmentation period. At the same age, 100% of the control batch- embryos entered the stage of advanced faringula, and in batch 2 all embryos were in the stage of incipient faringula. 60-72 hours post-fecundation, all embryos in the batch 3 died, 90% in the 40 somite stage of the segmentation period and 10% in the stage of incipient faringula. 85 hours post-fecundation, all embryos belonging to the control batch were in the larva stage, while in batch 2, 90% were in the larva stage and 10% died in the stage of advanced faringula.

Keywords: embryo, ethinylestradiol, *Cyprinus carpio*, development

**GENETICAL INACTIVATION OF PIKEPERCH (SANDER LUCIOPERCA) SPERM USING UV IRRADIATION
INACTIVAREA GENETICĂ A SPERMATOZOIZILOR DE ȘALĂU (SANDER LUCIOPERCA) PRIN UTILIZAREA RADIATIILOR UV**

A. GROZEA, I. BĂNĂȚEAN-DUNEA, ADA CEAN, B. KORBULY, M. BURA, A. OSMAN, D. PĂRĂU

Faculty of Animal Science and Biotechnologies, Timișoara

Although pikeperch is a promising species for intensive aquaculture and some experiments regarding all-female production in this species were made, there are no specifically data regarding genetical inactivation of pikeperch sperm. The aim of this study is to test two different UV lights (15 and 30 Watts) and exposure times of the diluted milt at UV irradiation for sperm genetical inactivation, in order to establish the first step in the gynogenesis protocol for pikeperch. The milt collected from 4 clinically health adult pikeperch males (3-4 years old) was diluted 1:9 with Ringer solution, after that being placed into Petri dishes (Ø = 3 cm) in a thin layer of 1 mm. Two UV lights (λ = 253.7 nm) at 15 Watts (variant V₁) and 30 Watts (variant V₂) were used in our experiments. These were placed 20 cm above Petri dishes, and were established for each variant, 5 different periods for exposure to the irradiation: 8 min. (T₁), 11 min. (T₂), 14 min. (T₃), 17 min. (T₄) and 20 min. (T₅). The successful of irradiation was assessed by percent of fertilization (at 2 hours post fertilization), daily percent of survival, percent of hatching and percent of haploids (embryos/larvae with severely curved backbones and other deformities). After this study we could conclude that genetically inactivation of the pikeperch sperm can be performed with 15 Watts and 30 Watts UV lights at an exposure time which can vary between 8 and 20 minutes.

Keywords: pikeperch, sperm, genetical inactivation, UV

**VARIATIONS SEASON AND ANNUAL MAIN INDICATORS
EUTROPHICATION SOME PONDS FISH.
NOTES (I) PARAMETER PHYSICAL- CHEMICAL**

**VARIATII SEZONALE SI ANUALE ALE PRINCIPALILOR INDICATORI DE
EUTROFIZARE A UNOR BAZINE PISCICOLE . NOTA (I) PARAMETRII
FIZICO - CHIMICI**

CRISTINA¹HEGEDŪS, SILVANA POPESCU², ANCA BOARU¹, C.BORDA², A.FORNADE

¹Faculty of Animal Sciences and Biotechnologies, Cluj -Napoca, România cristina.hegedus@yahoo.com

²Faculty Of Veterinary Medicine Cluj Napoca, Romania

Study physico- chemical parameters is an integral part in the study of any ecosystem, especially at the level of aquatic. Indicators of water quality is mirrored in the final fish production obtained, thei acting and interacting simultaneously.

Keywords: water quality, ponds, water degradation

**VARIATIONS SEASON AND ANNUAL MAIN INDICATORS
EUTROPHICATION SOME PONDS FISH.
NOTES (II). THE EVOLUTION OF PHYTOPLANKTON**

**VARIATII SEZONALE SI ANUALE ALE INDICATORI DE EUTROFIZARE
A UNOR BAZINE PISCICOLE.
NOTA (II). EVOLUTIA FITOPLANCTONULUI**

CRISTINA HEGEDŪS¹, SILVANA POPESCU², ANCA BOARU¹, C.BORDA², A.FORNADE

¹Faculty of Animal Sciences and Biotechnologies, Cluj -Napoca, România cristina.hegedus@yahoo.com

²Faculty Of Veterinary Medicine Cluj Napoca, Romania

The structure in the aquatic ecosystem of the whole can not be neglected in the first place because of the seasons, months, factors and processes that happens, with primary or secondary importance in relation to the problems studied (water quality, phytoplankton evolution, fish production).

Keywords: water quality, phytoplankton, fish ponds

**PRELIMINARY STUDY ON THE EFFICIENCY OF
SEVERAL OVULATION INDUCING HORMONES ON PIKEPERCH
(*SANDER LUCIOPERCA*)**

**STUDIUL PRELIMINAR PRIVIND EFICIENȚA DIFERIȚILOR HORMONI ÎN
INDUCEREA OVULAȚIEI LA ȘALĂU (*SANDER LUCIOPERCA*)**

B. KORBULY, A. GROZEA, ADA CEAN, I. BĂNĂȚEAN-DUNEA,
N. PĂCALĂ, P. SZILAGYI

Faculty of Animal Sciences and Biotechnologies, Timișoara, bogdank2@yahoo.com

*The development of European freshwater aquaculture needs diversification of its production with reliable culture methods of new fish species. From the last two decades, more research efforts were done in order to develop culture of pikeperch (*Sander lucioperca* L.). Most market size pikeperch come from open waters and relatively few are produced under intensive and/or indoor conditions. The aim of this study was to test the efficiency of different hormones on pikeperch ovulation in order to reproduce the species under controlled environmental conditions. Eight clinically healthy adult pikeperch females (3-4 years old) were used in our experiments. They were injected with human chorionic gonadotropine - hCG (Pregnyl) and carp pituitary extract (CPE), without photo-thermal stimulation. None of the females ovulated at 72 hours after the injection. When water temperature was increased to 17°C, females stimulated with hCG ovulated first, then one of the females stimulated with CPE. None of females from the control group ovulated.*

Keywords: pikeperch, hormones, ovulation.

**MILT DILUTION EFFECTIVENESS ON PIKEPERCH (*SANDER
LUCIOPERCA*) SPERM DNA INACTIVATION**

**DILUAREA LAPȚILOR DE ȘALĂU (*SANDER LUCIOPERCA*) PENTRU
CREȘTEREA EFICIENȚEI INACTIVĂRII
ADN-ULUI SPERMATOZOIZILOR**

B. KORBULY, A. GROZEA, ADA CEAN, I. BĂNĂȚEAN-DUNEA, N. PĂCALĂ, A. VĂLEAN

Faculty of Animal Sciences and Biotechnologies, Timișoara, , bogdank2@yahoo.com

*Percid fishes, including pikeperch (*Sander lucioperca*) have recently become the subject of intense research. In order to obtain gynogenetic all female pikeperch populations, normal pikeperch eggs are fertilized with inactivated sperm. Because pikeperch semen has a high viscosity, milt has to be diluted in an immobilizing solution before DNA inactivation. The aim of this study was to assess milt diluting solutions effectiveness in order to inactivate sperm DNA with UV irradiation, to produce meiotic gynogenetic pikeperch (*Sander lucioperca*). We assessed sperm motility after dilution in 5 different immobilizing solutions. Best results were obtained using Ringer's solution as pikeperch sperm diluent.*

Keywords: pikeperch, milt, dilution, DNA inactivation

**OBSERVATIONS REGARDING THE EMBRYONARY AND LARVAL
DEVELOPMENT OF STERLET
(ACIPENSER RUTHENUS)**

**OBSERVAȚII PRIVIND DEZVOLTAREA EMBRIONARĂ ȘI LARVARĂ A
CEGĂI (ACIPENSER RUTHENUS)**

CRISTINA MUSCALU-NAGY, R. MUSCALU-NAGY

Sc Sterlet SRL, cristina_muscalu@yahoo.com

Studying and presenting the embryo stages of sterlet has the main purpose of widening the knowledge horizon in this direction. Although all sterlet embryos originated from one female and from the same incubator (15°C, 9.6 mg/l of dissolved oxygen and a water flow of 2.7 l/min), they are in different stages of development at a certain time. Because the asynchronous development of embryos from one incubator is maintained throughout the incubation period, it is explained why not all embryos hatch at the same time. The first hatchings appear at the age of 145 hours from fecundation, the larvae have a very large yolk sack and are moving very fast, especially in obliquely upward direction. At one hour from hatching, the larvae presents clear opercularly movements. The last hatching occurs 193 hours from fecundation. The larval stage for Acipenser ruthenus lasts for 7-8 days, probably the larvae that hatched sooner have also a quicker absorption of yolk sack.

Keywords: sterlet, embryo, larvae, development

**PRELIMINARY STUDY OF DIFFERENT HORMONE TREATMENTS IN
THE ARTIFICIAL PROPAGATION OF PIKEPERCH (*Sander lucioperca*)
REGARDING THE ASPECTS OF ANIMAL WELFARE**

**STUDIUL PRELIMINAR ASUPRA TRATAMENTELOR CU
DIFERIȚI HORMONI ÎN REPRODUCEREA ARTIFICIALĂ A ȘALĂULUI
(*Sander lucioperca*) PRIVIND ASPECTE DE
BUNĂSTARE ANIMALĂ**

Á. NÉMETH¹, E. SZÜCS², L. SZATHMÁRI²

¹ Dél-Hal Halászati Kft. Százhalombatta Arany J. u. 7. H-2440, Hungary

² University of West Hungary Faculty of Agricultural and Food Sciences
Mosonmagyaróvár, Vár 2. H-9200, Hungary
e-mail: info@del-ha.hu

*The pikeperch (*Sander lucioperca*) is very important and valuable freshwater fish in Hungary. The quality of flesh is very high (white, tasty and boneless) thus the gastronomically demand grows year by year. Besides the pikeperch is an attractive game fish and as a top predator, plays an important role in the maintenance of ecological balance in freshwater ecosystems. The success of pond culture of pikeperch depends on the propagation and nursing methods. Recently the technological development of artificial reproduction ensures the production of more fry and fingerlings. Present study investigates the different reproduction methods in consideration of the spawning behaviour of the pikeperch breeders. Between the hormone treatment and spawning there were observed six stages in the behaviour of pike-perch couples. In addition to the observations on behaviour of spawning, various hormone products were examined in order to stimulate and synchronise the ovulation of pike perch breeders. Best results were recorded in case of using dried carp pituitary as a hormone treatment (170g eggs/stripped females), while the treatment with GnRH analogs resulted 145 g respectively. Moreover the price and biological advances of GnRH analogs require more research in their use in the field of artificial propagation of pikeperch. These hormones do not interfere violently the neuro-humoral regulation of the ovulation, thus contributes to maintain better conditions of animal welfare during the propagation procedure.*

Keywords: pikeperch reproduction ethology, GnRH analog, pseudo-somathycal, index

**PATHOLOGICAL TISSUE LESIONS INDUCED BY CHRONIC CADMIUM
INTOXICATION IN SILVER CRUCIAN CARP
CARASSIUS AURATUS GIBELIO**

**LEZIUNI PATOLOGICE TISULARE INDUSE DE INTOXICAȚIA CRONICĂ
CU CADMIU LA CARASUL ARGINTIU CARASSIUS AURATUS GIBELIO**

NICULA MARIOARA, DUMITRESCU GABI, PETCULESCU - CIOCHINĂ LILIANA,
BĂNĂȚEAN-DUNEA I., MOȚ MARIA, TĂPĂLAGĂ I.,
LUNCA M., BOCA LILIANA

*Faculty of Animal Sciences and Biotechnologies, Timișoara, România
mnicula@animalsci-tm.ro*

The purpose of this work was to describe the histopathological effects of chronic cadmium intoxication on liver, gill, kidney, intestine and striated muscle in silver crucian carp Carassius auratus gibelio. 25 immature 1+-year-old crucian carp were obtained from a private fishfarm and acclimated to laboratory conditions. After a 21 days exposure to a sublethal cadmium concentration (1.625 ppm from a Cd (CH₃COO)₂ x2H₂O stock solution), liver, gill, kidney, small intestine and striated muscle were sampled and processed for histological examination.

Histopathological alterations induced by studied heavy metal in the tissues of silver crucian carp specimenes were: nephrocite hypertrophic processes, destruction of intercellular junctions, stratification of epithelium and congestions both in renal glomerulis and in interstitium; hyalinizations, congestions of blood vassels and vacuolations associated with lipid accumulation at the hepatic level; into intestinal mucosa revealed rich leucocyte infiltrates, with numerous leucocytes situated intraepithelial; branchial lamelles with disordered aspect and multilayered epithelium, vascular ectasias and leucocyte infiltrates into subepithelial connective tissue at the gill level; miolysis processes in peripheral muscular fibers manifested by contractile apparatus alteration on large areas

Keywords: fish, chronic cadmium intoxication, histopathological changes

**A NEW MODULA TYPO-DIMENSIONAL, CONSTRUCTIVE AND
FUNCTIONAL CONCEPT OF VIVA DON EXPERT® FLOATABLE FISH
CAGES FOR INTENSIVE AQUACULTURE IN INLAND WATERS**

**UN NOU CONCEPT MODULAR TIPO-DIMENSIONAL, CONSTRUCTIV ȘI
FUNȚIONAL DE VIVIERE FLOTABILE VIVA DON EXPERT® PENTRU
ACVACULTURĂ INTENSIVĂ PE APELE CONTINENTALE**

D. ONEA¹, V. CRISTEA²

¹Don Expert Company SRL Constanța, Romania, donexpertcompany@yahoo.com

²Faculty of Food Science and Engineering, "Dunărea de Jos" University, Galați, Romania

This scientific work presents succinct information about the trials which takes place between 2005-2009 in Constanta (fish farm Canalul Rompetrol). This trials includes the fish farming in cages and leads to finishing off and elaboration of a new modular typo-dimensional, constructive and functional concept of viva don Expert® floatable fish cages for intensive aquaculture in inland waters from Romania like an efficient solution for the qualitative and quantitative increase of local fish production's (by water volume optimizations, plants, fish farms and technologies optimizations)

Keywords : floatable fish cages, modulus, concept

CYPRINIDS TOTAL BLOOD PROTEINS DETERMINATION

DETERMINAREA PROTEINELOR TOTALE DIN SANGE LA CIPRINIDE

TANȚI PATRICHE¹, N. PATRICHE², MAGDALENA TENCIU²

1- Morphological Science Dept., Faculty of Medicine and Pharmacy, "Dunarea de Jos" University Galati
Romania, e-mail: tanti.patriche@yahoo.com

2 - Institute of Research and Development for Aquatic Ecology, Fishing and Aquaculture Galați, Romania

In aquaculture to get a high production is conditioned by awareness and keeping of an unaltered health condition of the biological material. To be aware of the health condition of the biological material in a fish farm allows us to establish the preventive measures required to prevent spreading of a disease and the treatment to be applied in case that a mass disease occurs. The level of the total protein in serum is, first of all, a synthetically indicator of the nutritional condition of the organism, presenting, at the same time, ample qualitative and quantitative variations depending on species, age, sex, stage of sexual maturity, water temperature and especially in correlation with the health condition of fish. Modification in value of the total protein point out some metabolic perturbations in fish body.

Keywords: total protein in serum, determination, carp, disease.

THE IMPORTANCE OF GLUCOSE DETERMINATION IN THE BLOOD OF THE CYPRINIDS

IMPORTANȚA DETERMINĂRII GLUCOZEI DIN SÂNGELE CIPRINIDELOR

TANȚI PATRICHE

Morphological Science Dept., Faculty of Medicine and Pharmacy, "Dunarea de Jos" University Galati,
Romania, e-mail: tanti.patriche@yahoo.com

The range of paraclinical investigations applied in ichthyopathology aims at assessing those parameters biochemical that can define the pathological modifications and the normal physiological condition of the fish materia. Modification in value of these indicators points out some metabolic perturbations in fish body. To be aware of the health condition of the biological material in a fish farm allows us to establish the preventive measures required to prevent spreading of a disease and the treatment to be applied in case that a mass disease occurs. That is why to know the value of the serical glycemia enables us to differentiate the normal physiological condition of the fish material under research from the eventual pathological modifications having occurred due to the defence reaction of the organism, the first representing a high value marker indicator of the stress condition (Kebus and colab., 1992; De Dominis and colab., 1993; Barry and colab., 1993; Bau and colab., 1994; Rehulka, 1996).

Keywords: serical glycemie, detremination, carp, stress.

MONITORINGUL CALITĂȚII APEI ÎN SISTEMELE RECIRCULANTE DE STURIONICULTURĂ INTENSIVĂ

THE WATER QUALITY MONITORING IN THE RECIRCULATING SYSTEMS FOR INTENSIVE STURGEON CULTURE

C. SAVIN¹, V. CRISTEA², I. VASILEAN², N. PATRICHE¹, MARILENA TALPEȘ¹

¹ – Institutul de Cercetare Dezvoltare pentru Ecologie
Acvatică, Pescuit și Acvacultură Galați

² – Universitatea „Dunărea de Jos” Galați
e-mail: crsavin@yahoo.com

*The major modification of those parameters go to apparition of the biological and physico-chemical imbalance of water environment who produce disturbance to normal way of vital function, that respond through the primary physiological modification (endocrine) follow by secondary physiological modification (hormonal), with direct influence over the growing parameters and the pathological condition. The rearing experiments were lasting 60 days and have been achieved on young beluga sturgeon (*Huso huso*) in two different locations, with two different recirculating pilot systems. Was analyzed the main physico-chemical parameters of sturgeon culture, obtaining 23 - 25°C temperature, 4 – 5 mg/l dissolved oxygen, 7,6 upH pH, 0,02 – 0,23 mg/l ammonia, 0,13 – 0,17 mg/l ammonium, 0,09 – 0,45 mg/l nitrite and 10,55 – 72,06 mg/l nitrate.*

Keywords: recirculating system, water quality, sturgeon, sturgeon culture, beluga sturgeon.

RESULTS CONCERNING THE USE OF THE,NERISTIN’ SYNTHETIC HORMONE IN THE ARTIFICIAL REPRODUCTION OF THE *HYPOPHTHALMYCHTYS MOLITRIX* (VAL) SPECIES

REZULTATE PRIVIND UTILIZAREA HORMONULUI SINTETIC “NERISTIN” LA REPRODUCEREA ARTIFICIALĂ A SPECIEI *HYPOPHTHALMYCHTYS MOLITRIX* (VAL)

ADINA SIRBU, S. STANCIOIU, V. CRISTEA, A. DOCAN

**Department of Aquaculture, Environment Science and Cadaastre, Faculty of Food Science and Engineering, Galatz “Dunarea de Jos” of University, 47, Domneasca St., 800008 Galatz, Romania, adina.popescu@ugal.ro*

*The paper presents data about the artificial reproduction of the *H. molitrix* species. The artificial reproduction took place in the station destined to the reproduction of the phytoplanktonophag fish of the Carja 1 fish farm – Vaslui. The annual batch of breeders came from the personal stock of the Carja 1 farm. The experimental work took place between 2005-2007, following the work methodology and the phases of the technological process. The stimulation of the maturation was done with neristin and carp hypophysis, watching through comparison the technological indicators specific to the artificial reproduction. The results of the experiments are presented in tables and in graphs.*

Keywords: hypophysis, neristin, reproduction, maturation.

STUDY ABOUT CORPORAL INDICATORS IN JUVENILE OF RUSSIAN STURGEON (*ACIPENSER GÜELDENSTAEDTI*) RAISED IN RECIRCULATING SYSTEM

STUDII ASUPRA INDICILOR CORPORALI LA PUIETUL DE NISERU (*ACIPENSER GÜELDENSTAEDTI*) CRESCUT ÎN SISTEM RECIRCULANT

Z.T SZELEI, M. BURA, A. GROZEA, CRISTINA MUSCALU-NAGY,
I. BĂNĂȚEAN-DUNEA.

Faculty of Animal sciences and Biotechnologies Timisoara

*Studies were conducted on a population of Russian sturgeon (*Acipenser güeldenstaedti*) age between 132-175 days, raised in recirculation system. Based on body weight, the population was divided into two categories: 50-100 g and 100-150 g. On the 42 individuals were performed determinations of weight, length, width, height and circumference. It was also determined the number of shields which comprise the five lines of shields, which are endowed with Russian sturgeons. On the basis of weighing and measurements taken have resulted following body indices: the index of profile (height), the index of thickness (width spinal), the fattening index (Fulton index), quality index and the index of fleshiness. At the lot of Russian sturgeons with average body weight of 127.55 ± 3.75 g, body length is 76.27% of total body length, head length is 20.11% of the total length of the body, caudal peduncle length measured 16.39% of total body length and length of snout reaches 45.56% of head length. Index of profile (height) has highlighted that juvenile Russian sturgeon has an elongated body and a straight back.*

Keywords: *Acipenser güeldenstaedti*, corporal indices, RAS.

PERSPECTIVES REGARDING THE DEVELOPMENT OF INTENSIVE REARING TECHNOLOGY FOR *SILURUS GLANIS* SPECIES IN ROMANIA

PERSPECTIVE PRIVIND DEZVOLTAREA TEHNOLOGIEI DE CRESTERE INTENSIVA A SPECIEI *SILURUS GLANIS* IN ROMANIA

MARILENA TALPEȘ¹, N. PATRICHE¹, MAGDALENA TENCIU¹, F. ARSENE¹

¹ *Institute of Research-Development for Aquatic Ecology, Fishing and Aquaculture
Portului Street 54, Galați, România, email: icdeapa@icdeapa.ro*

*This work represents the early development of a new rearing system of species *Silurus glanis* in Romania, meaning the growth cycle of biological material from 1 g/ex. - fry to 1.2 kg / ex. - average weight. These are achieved in the first phase of development into a "flow-through" system type, then during a cold season, within a recirculating system.*

Keywords : *aquaculture, catfish, intensive , "Flow-Through" system recirculating system*

STUDY ON RESTING BEHAVIOR IN THREE MONTHS OF AGE CALVES FROM ROMANIAN BLACK AND WHITE BREED DURING WINTER

STUDIUL COMPORTAMENTULUI DE ODIHNĂ LA TINERETUL DE RASĂ BĂLȚATĂ CU NEGRU ROMÂNEASCĂ ÎN VÂRSTĂ DE 3 LUNI ÎN SEZONUL DE IARNĂ

S. ACATINCĂI, I. TRIPON, G. STANCIU, D. GAVOJDIAN, B. BÂNDIU, S.S. BÎRCACI

Faculty of Animal Sciences and Biotechnologies, Timișoara, România, sacatincai@yahoo.com

The aim of this paper was to measure the main aspects that characterize the resting behavior of three months old calves. During the experiments the following resting behavior aspects were determined: number of resting periods, the length of resting periods. Results showed that in the winter season the total length of laying down periods was 171.5 minutes in the morning, 222.8 minutes in the afternoon and 403.9 minutes during the night. In the winter season calves stood down in 3.7 periods during the morning, 4.4 periods during the afternoon and 2.9 periods during the night. There were significant differences between morning and afternoon ($p<0.001$), between morning and night ($p<0.001$) and between afternoon and night ($p<0.001$) for total time spent lying down. In the winter season the total time spent resting (sleep and rest laying down) was 79.7 minutes in the morning, 115.8 minutes in the afternoon and 239.6 minutes during the night. There were significant differences between morning and afternoon ($p<0.01$), between morning and night ($p<0.001$) and between afternoon and night ($p<0.001$) for total time spent resting by calves.

Keywords: calves, resting behavior, Romanian Black and White breed

STUDY REGARDING RUMINATION BEHAVIOUR IN MULTIPAROUS ROMANIAN BLACK AND WHITE COWS DURING SUMMER SEASON

STUDIUL PRIVIND COMPORTAMENTUL DE RUMEGARE LA VACILE MULTIPARE DIN RASA BĂLȚATĂ CU NEGRU ROMÂNEASCĂ ÎN SEZONUL DE VARĂ

S. ACATINCĂI, D. GAVOJDIAN, L. T. CZISZTER, I. TRIPON,
ALINA ALUNGEI, C. POPIAN

Faculty of Animal Sciences and Biotechnologies, Timișoara, România sacatincai@yahoo.com

In this study rumination activity of ten lactating Romanian Black and White multiparous cows housed in total confinement in tied stalls was observed continuously 24 hours per day. Researches were carried out during two weeks, in June 2008. To record the behaviour four video cameras were used connected to a video capture device of 125 fps (frames per second) of CC9622BIR type. There were two experiments, first experiment (48 hours) average air temperature in the shed was 31.76 °C and 24.16 °C during the second experiment. During first experiment, cows spent ruminating on average in 24 hours 350.60 minutes, in 14.60 periods, with an average length of a rumination period of 24.81 minutes. During second experiment, cows spent ruminating on average per day, 543 minutes, in 17.10 ruminating periods and with an average length of each period of 26.64 minutes. Differences between the two experiments during 24 hours were registered to be 102.40 minutes for total time spent ruminating, 2.50 ruminating periods and 1.83 minutes for the average length of a rumination period. Thus, in spite of same housing and feeding conditions, rising temperature upwards of superior thermal comfort of the breed (27-28 °C), rumination process is severely affected.

Keywords: rumination; multiparous cows; Romanian Black and White

PERFORMANCE ANALYSIS OF EFFECTIVE PRODUCTION OF MILK COWS FROM ROMANIAN BREED MOTLEY WITH BLACK EXPLOITED IN A FEW LIVESTOCK FARMS FROM ALBA COUNTY

ANALIZA PERFORMANTELOR DE PRODUCTIE A UNOR EFECTIVE DE VACI CU LAPTE, DIN RASA BALTATA CU NEGRU ROMANEASCA EXPLOATATE IN CATEVA FERME REPREZENTATIVE DIN JUDETUL ALBA

A. F. AVRAM, I.R. MOLDOVAN, A. PECE, G. MUREȘAN

*University Agricultural Science and Veterinary Medicine, Faculty of Animal Husbandry and Biotechnology, 3 – 5 Mănăștur Street, Cluj-Napoca, Romania,
e-mail: alinutz1307@yahoo.com*

The research aimed to analyze the productive level of Romanian breed motley with black and of his half-breed, in three representative different dimensioned livestock farms from Alba County, and to observe if this breed is suitable for milk production in conditions existing in this county.

Farms whose effectives have been taken in the study are: S.c. Biotera S.R.L from Dostat commune, Boz village, which has 456 caws (from which 330 annually milked; S.c Stazoo S.R.L located on the right side of the Teius city exit through Alba-Iulia, which has 107 caws from which 86 annually milked, and S.c Zooagro S.R.L farm from Galda de Jos commune which has 40 caws(31 annually milked).

Keywords: quantity and milk quality values

DYNAMICS OF BEEF GRADING CARCASSES IN ROMANIA, FROM BEGINNING TO PRESENT

DINAMICA CLASIFICĂRII CARCASELOR DE VITĂ ÎN ROMÂNIA, DE LA ÎNCEPUT PÂNĂ ÎN PREZENT

IOANA BĂLAN¹, CORNELIA PETROMAN¹, I. PETROMAN¹,
DIANA MARIN¹

¹*Faculty of Agricultural Management, Timișoara, România
ioanambalan@yahoo.com*

Carcass grading is the operation of carcass quality assessment, depending on the relationship between the three major components: meat, fat and bones. In the case of cattle carcasses, this is represented by the visual assessment of muscle development and fat deposits. The researches performed lead to the conclusion that the interest of the cattle breeders from Romania for cattle trade in concordance with the EUROP system is lower than in the other EU member states, because it does not present material advantages.

Key words: Grading, dynamics, beef carcasses

PRICE DEVELOPMENTS OF BEEF CARCASSES IN ROMANIA AND EUROPEAN UNION

EVOLUȚIA PREȚULUI CARCASELOR DE BOVINE ÎN ROMÂNIA ȘI ÎN UNIUNEA EUROPEANĂ

IOANA BĂLAN¹, CORNELIA PETROMAN¹, I. PETROMAN, DIANA MARIN¹

¹*Faculty of Agricultural Management, Timișoara, România*
ioanambalan@yahoo.com

The main objectives of the classification of cattle carcasses (beef and veal) are represented by the correct payment to cattle breeders, according to carcass weight and quality, and standardization, the common language in the international meat trade. The European Union set uniform procedures for quality assessment (the EUROP system), defined by the same parameters in the whole continent. Romania is at the beginning of cattle carcass classification; it is in the third year of reporting on the classification results to the European Commission. In this context, we consider it is very important to analyze these results, for a continuous improvement of carcass quality.

Keywords: Price development, beef carcasses, Romania, European Union

STUDY ON PHENOTYPIC CORRELATIONS AMONG MILK PRODUCTION AND MILK CHEMICAL COMPOSITION

STUDIUL CORELAȚIILOR FENOTIPICE DINTRE CANTITATEA DE LAPTE PE LACTAȚIE ȘI COMPOZIȚIA CHIMICĂ A LAPTELUI

SIMONA BAUL, G. STANCIU, L. T. CZISZTER, S. ACATINCĂI, I. TRIPON, D. GAVOJDIAN, ERINA SILVIA, A. BOGNAR

Faculty of Animal Sciences and Biotechnologies, Timișoara, Romania
simonabaul@yahoo.com

In this study, the phenotypic correlations among quantitative and qualitative indices of the milk production in Romanian Black and White cows from the Didactical farm Timișoara were studied. Studies were carried out on 125 lactations from 92 cows. Correlations coefficients and their statistical significance were calculated. Correlations among the milk yield and the yield of milk chemical components were positive taking values over 0.900, and very significant ($p < 0.001$). Correlations between milk yield and qualitative indices of milk (butterfat percentage, protein percentage, lactose percentage, solids non-fat percentage and total solids percentage) varied between $r = -0.002$ with butterfat percentage until $r = 0.187$ with protein percentage, but the values did not reach the level of statistical significance ($p > 0.05$). Among the percentage of milk constituents very significant correlations were obtained ($p < 0.001$), values varied from $r = 0.427$ between butterfat and lactose percentages to $r = 0.911$ between lactose and solids non-fat percentages.

Key words: phenotypic correlations, milk yield, milk chemical components, Romanian Black and White, cows

THE STUDY OF BODY CONDITIONS OF HOLSTEIN - FRISIAN COWS IN THE FIRST 80 DAYS OF LACTATION

STUDIUL CONDIȚIEI CORPORALE LA VACI DIN RASA HOLSTEIN - FRIZĂ ÎN PRIMELE 80 DE ZILE DE LACTAȚIE

I. BENCSIK, N. PĂCALĂ, D. DRONCA, ADRIANA MOLDOVAN

University of Agriculture Sciences and Veterinary Medicine of Banatului – Timisoara, bencsik54@animalsci-tm.ro

Body condition represents the physiological and maintenance stage of an animal at a given time. The study on the body condition of the cows was conducted on a group of 22 Frisian Holstein cows. The average milk production per normal lactation (305 days) was 8664 kg. The animals were bred in free stall, stand for milking type 5x1. The body condition was assessed after calving (postpartum) and 80 days later. The body condition index decreased by 26, 39% in this time interval, achieving the critical score of 2.5 points. The production of milk represented the 27, 64±0, 98% of the total average milk production. The appreciation of the body condition using the point method represents an easy method. The appreciation of the body condition by the point method represents a valuable tool for the health monitoring and proper nutrition of cows with superior genotypes.

Keywords: herd management, milk production, body condition scoring (BCS)

COMPARATIVE STUDY ON THE MILK PRODUCTION IN TWO ROMANIAN BLACK AND WHITE COW POPULATIONS FROM WESTERN ROMANIA

STUDIUL COMPARATIV AL PRODUCȚIEI DE LAPTE LA DOUĂ POPULAȚII DE VACI DE RASĂ BĂLȚATĂ CU NEGRU ROMÂNEASCĂ DIN VESTUL ROMÂNIEI

A. BOGNAR, G. STANCIU, L.T. CZISZTER, S. ACATNCĂI, I. TRIPON, SIMONA BAUL, D. GAVOJDIAN

Faculty of Animal Sciences and Biotechnologies, Timișoara, România

The aim of this study was to compare the milk production of the Romanian Black and White cows raised in two counties (Timiș and Caraș-Severin) from the western Romania. Researches were carried out on 3,579 lactations (3,110 from Timiș and 469 from Caraș-Severin) finished in year 2008. Results showed that cows in Caraș-Severin produced significantly more milk per lactation compared to cows from Timiș ($p < 0.05$), except for the butterfat percentage ($p > 0.05$). On average, cows from Caraș-Severin produced 4710.9 kg milk with 3.939% butterfat, 186.13 kg butterfat, 3.337% protein and 156.92 kg protein per normal lactation, while cows from Timiș produced 4216.5 kg milk with 3.948% butterfat, 166.22 kg butterfat, 3.130% protein, and 131.22 kg protein. Differences for milk production per total lactation were lower, but still significantly different ($p < 0.05$). Cows in Timiș had longer days in milk than cows in Caraș-Severin (363.7 vs. 341.2 days, $p < 0.001$).

Keywords: milk production, Romanian Black and White, cows

THE EFFECT OF THE STRUCTURE OF THE PASTURE GROWTH ON THE SUBSTITUTION OF FATTY ACIDS IN THE MILK OF GRAZING DAIRY COW

EFFECTUL STRUCTURII PĂSUNII ASUPRA ÎNLOCUIRII ACIZILOR GRAȘI DIN LAPTELE VACILOR CARE PĂȘUNEAZĂ

LUCIE BOHAČOVÁ, EVA DVOŘAKOVÁ, B. ČERMÁK, J. ŠPIČKA,
LUCIE VÁVROVÁ

Faculty of Agriculture, University of South Bohemia, České Budějovice, Czech Republic lucie.bohacova@szif.cz,
eva.dvorakova@szpi.gov.cz

The milk fat is unique among animal kinds of fat, because of its high content of fatty acids with short and medium long strings. Milk industry should be able to produce milk and dairy products with raising part of unsaturated FAs, which is useful and desirable for consumer. The milk samples were withdrawal individually once a month from 20 dairy cows of Holstein breeding. The milk fat was separated by extraction in petrol-eter and further on it was re- esterifasised and methyl ester fatty acids were analysed by the help of gas chromatography (GLC). In exception of the current fatty acids was monitored also the substitution of families of fatty acids, it means saturated (SAFA), mono-non-saturated (MUFA) and poly-non-saturated (PUFA) greasy acids. From pasture growth is assessed the percentage of nitrogen matters (NL) according to Kjeldahla, crude fibre (CF), acido- detergent fibre (ADF) and neutral- detergent fibre (NDF) on instrument called Ankom Technology. The content of nitrogen matters in the herbal growth decreases during the herdsmen season and at the same time the content of CF increases. The content of coarse fibre during the herdsmen season in herbal growth increases from 18,72 % in May to 28,54 % in July and afterwards again diminishes to 20,51 % in September. It was stated the significant differences in funds ADF between the begin and the end of the pasture period ($P < 0,01$). Milk performance during the pasture period showed decreasing tendency in daily vessel from 23,4 l/piece/day in July to 22,10 l/piece/day in September. The content of oil in milk (as well as content of CF in pasture growth) during the pasture increases, namely from 3,78 % in May to 3,82 % in September. During the pasture season was the average efficiency of a dairy cow per day 22,44 l and during pasture period 20,27 l milks. The average concentration of fat in milk was higher during the winter period, up to 4,11 %, compared with 3,78 % in month September ($II < 0,01$).

Keywords: pasture dairy cows, chemical constitution growth, milk performance, fatty acids.

APPROACH REGARDING SOME CONFORMATION AND MILK PRODUCTION TRAITS IN ROMANIAN SIMMENTAL CATTLE FORM HARGHITA AREA INCLUDED IN THE OFFICIAL CONTROLL

STUDIUL PRIVIND UNELE ÎNSUȘIRI DE CONFORMAȚIE ȘI PRODUCȚIE DE LAPTE LA EFECTIVUL DE TAURINE DIN RASA BĂLȚATĂ ROMÂNEASCĂ DE TIP SIMMENTAL DIN JUDEȚUL HARGHITA CUPRINS ÎN CONTROLUL OFICIAL

V. CIGHI, T. OROIAN, D. DRONCA, CLAUDIA T. SOCOL

University of Agricultural Sciences and Veterinary Medicine, Faculty of Animal Husbandry and Biotechnology, Cluj-Napoca, Romania, e-mail: vasile_cighi@yahoo.com

Analysis of performance data regarding the conformation traits (withers height, body weight, thoracic perimeter), including the traits that concur to milk production (total milk production per normal lactation, fat percent, total fat amount from milk), in mothers-cattle of bulls, candidate mothers-cattle of bulls and active population of Romanian Spotted Simmental breed from Harghita region, allow us to ascertain the followings:

The body weight of mothers-cattle of bulls, candidate mothers-cattle for bulls and also of those from the active population of Harghita region, prove the existence of a valuable genetic material with a high superiority of 30 kg of the mothers-cattle of bulls related the candidate mothers-cattle of bulls and of 50 kg related the active population; all of these emphasize the stringency of the selection performed. Analyzing the waistline of the three populations, it was possible to ascertain that the mothers-cattle of bulls values over class those of the candidate mothers-cattle of bulls and of the active population with 1 cm, respectively 4,1 cm. This difference indicates the researchers concern for raising the waistline in the Romanian Spotted Simmental breed from Harghita region. The thoracic perimeter values were adjacent those of the mothers-cattle of bulls and of the candidate mothers-cattle of bulls (200,00±3,70 cm respectively 199,30±1,24 cm and 185,70±0,61 cm in the active population). The values of circa 7000 kg milk realized in normal lactation of the mothers-cattle of bulls and candidate mothers-cattle of bulls, are showing a very good intensity of the selection, proved by the selection difference registered between the active population and the above two categories. These high milk productions registered for the mothers-cattle of bulls and candidate mothers-cattle of bulls are indicating a high productivity potential. The 250 kg of total milk fat achieved are showing a high potential of the Romanian Spotted Simmental breed as additive variation arrearage that can be used in selection for this trait.

The fat percent of milk registered in the three populations indicate their in-framing between the normal limits specific for the Romanian Spotted Simmental breed.

Keywords: Romanian Spotted Simmental breed, increased production performances, selection effect, additive variation.

THE INFLUENCE OF NUTRIENTS CONTENT IN PASTURE ON AMINO ACIDS CONTENT OF COWS MILK

INFLUENȚA COMPONENTILOR NUTRITIONALE DIN PĂȘUNI ASUPRA CONȚINUTULUI DE AMINOACIZI DIN LAPTE DE VACĂ

E. DVOŘÁKOVÁ, L. BOHÁČOVÁ, L. VÁVROVÁ, B. ČERMÁK, M. ŠOCH,
J. FRELICH

The Agriculture Faculty of South Bohemian University in České Budějovice Czech Republic, cermak@zf.jcu.cz

The chemical composition of milk and its relation to grazing is emphasized in low-input breeding systems where generally lower milk production use to be achieved. The aim of this study was to evaluate the milk composition of Czech Pied and Holstein cows during 6-months grazing period in comparison to winter silage-based breeding on three sub-mountain farms. The individual 24-hours milk yields and concentrations of fat, protein and somatic cell counts (SCC) were measured monthly in a total of 671 Czech Pied and 114 Holstein cows during 6-years period. Cows belonged to two Czech Pied herds, offered 7-hours (Farm 1, F1) or 20-hours (Farm 2, F2) daily grazing allowance, and to a mixed Czech Pied and Holstein herd (Farm 3, F3) offered 20-hours pasture access. The data of each herd were evaluated separately allowing to the season (grazing, housing) and the breed. A significant enhancement of fat yields was found during grazing season in all three herds and in both the breeds. The higher protein yields in grazing seasons were found in F2, F3, whereas no difference to housing season was found in F1. These results indicate the positive effect of longterm access to pasture on the fat and protein milk yields without significant enhancement of SCC on the surveyed farms.

This project by MSM 6007665806 was supported.

Keywords: Pasturage, cattle, Czech Pied cattle, Holstein cattle, milk performance.

POLYMORPHISM OF STEAROYL-COENZYME A DESATURASE GENE IN SLOVAK PINZGAU CATTLE

POLIMORFISMUL GENEI STEAROIL-COENZIMA A DESATURAZA LA PINZGAU SLOVACĂ

M. GÁBOR, ANNA TRAKOVICKÁ, MARTINA MILUCHOVÁ

Slovak University of Agriculture in Nitra

misogabor@yahoo.com

*The work was oriented to identification of SCD gene polymorphism in population of Slovak pinzgau cattle. The material involved 91 cows of pinzgau breed kept in Slovakia. Bovine genomic DNA was isolated by phenol-chloroform deproteinization and ethanol precipitation. The polymorphism of SCD gene was detected by PCR-SSCP method. For the checking of correct genotyping was used PCR-RFLP method. The PCR products were digested with *SatI* restriction enzyme. The mutant allele C (Ala) was detected by 205bp, 70 bp and 40 bp fragments and the wild allele T (Val) was detected by 205 bp and 117 bp fragments on 3 % agarose gel.*

In the total population included in the study was detected homozygous genotype CC (0.31), heterozygous genotype CT (0.42) and homozygous genotype TT(0.27). The frequency of occurrence both alleles proved gently of predominance of mutant allele C – 0.52 before wild allele T – 0.48 .

Keywords: Pinzgau cattle, PCR-RFLP, PCR-SSCP, SCD gene

THE EFFECTS OF ORAL ADMINISTRATION OF PROPYLENE GLYCOL AND CALCIUM PROPIONATE IN DAIRY COWS

EFFECTUL ADMINISTRĂRII ORALE AL PROPYLEN GLICOLULUI SI PROPIONATULUI DE CALCIU LA VACILE DE LAPTE

C. GAVAN, V. MOTORGA

Agricultural Research & Development Station Simnic; e-mail: simnic@simnicscda.ro

This study was designed to determine the effects of the oral administration of propylene glycol and calcium propionate on performance of dairy cows. Treatments were 10 l water (control), 10 l water+300 ml propylene glycol (GP) and 10 l water+500 g calcium propionate (CP). Animals were mainly of Holstein breeds and were fed and managed in a commercial setting. The cows were divided randomly into an experimental group, n=24 (n=12 with PG and n=12 with CP) and a control group, n=11. Cows received the assigned treatment within 10 hours of calving and 24 hours after calving. Health events were recorded during calving and for the first 21 days in milk (DIM). Health examinations were performed on cows that appeared not well. The cows were milked three times daily and milk production was recorded electronically. Milk solid content and somatic cell score were determined from three consecutive milking weekly till 20 DIM and then monthly till 110 DIM. Retained placenta, hypocalcaemia, displaced abomasums, ketosis and metritis were low in treatment groups (with PG and CP). The cows receiving PG had 2.8 Kg/day greater milk production than control group. The cows receiving CP had 1.7 kg/day greater milk production than control group. Prophylactic administration of PG and CP drenches to Holstein cows may be justified by potentially higher milk yields and reduced health complications.

Keywords: propylene glycol, calcium propionate, oral administration, periparturient problems

THE EFFECT OF SUPPLEMENTAL LIGHT ON MILK PRODUCTION IN HOLSTEIN DAIRY COWS

EFFECTUL SUPPLEMENTĂRII CU LUMINĂ ASUPRA PRODUCȚIEI DE LAPTE LA VACILE HOLSTEIN

C. GAVAN, V. MOTORGA

Agricultural Research & Development Station Simnic; e-mail: simnic@simnicscda.ro

20 multiparous cows were utilized to investigate effect of supplemental light on milk production. Cows were randomly assigned to one of two treatments (n=10): a) 10-13 hours of light and 14-11 hours of darkness/d natural light -NL group; b) 17 hours of light (natural light + supplemental light) -SL group. Supplemental lighting of 350 lx at eye level was provided by fluorescent lamps, controlled by an automatic timer. Multiparous cows in SL group produced more fat corrected milk (FMC) than multiparous cows in NL group. The efficiency of production in dairy cows can be enhanced by the photoperiod manipulation and thus provide another management tool for dairy producers to enhance productivity.

Keywords: photoperiod, milk yield, supplemental light

DAILY TIME BUDGET OF DAIRY COWS HOUSED IN TIE STALL BARN, DURING TOTAL CONFINEMENT

BUGETUL DE TIMP AL ACTIVITĂȚILOR ZILNICE LA VACILE AFLATE ÎN LACTAȚIE ÎNTREȚINUTE LEGAT, 24 DE ORE PE ZI

D. GAVOJDIAN¹, L.T. CZISZTER¹, S. ACATINCĂI¹, G. STANCIU¹,
I. TRIPON¹, MARIANA FEILER²

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, Romania

²S.C. JOSEMILK S.R.L. Gătaia, Timis county, Romania

gavojdian_dinu@yahoo.com

Although individual and social behavior of cattle has been studied extensively under pasture and loose housing conditions, similar behavioral data for partial or total confinement housing are limited. Essentially, the 24-h time budget represents the net response of a cow to her environment (Grant, 2003). Daily time budget was first introduced by Grant and Albright (in 2000) for cows housed in free-stall environment. Choices in stabling and management affect the behavior, health, longevity and performance of cows. Behavior while resting, eating, ruminating, urinating or defecating provides additional information about comfort. In the current study were used ten Romanian Black and White multiparous cows, housed in a tie stall barn 24 hours per day. Experiments were carried out during the cold season, in February 2008. Cows monitored were in their first hundred days of lactation. In our study cows spent resting on average 379.9 minutes (6.33 hours), value that represents 26.38 % from the day's interval. Time devoted to feeding was on average 341.9 minutes (5.69 hours), in 17.5 periods. Rumination had place on average in 17.3 periods and a total time of 517.5 minutes (8.62 hours). Cows adopted lying position on average 581.2 minutes (40.36% from 24-h) and standing position on average in 858.7 minutes (59.63% from 24-h).

Keywords: dairy cows; tie stall barns; cattle behavior; time budget

QUALITY AND ECONOMIC EFFICIENCY IN MILK PRODUCTION AT S.C.D.C.B. ARAD

CALITATE ȘI EFICIENȚĂ ECONOMICĂ ÎN PRODUCȚIA DE LAPTE LA S.C.D.C.B. ARAD

ANUȚA MAGDIN, AURELIA SĂLĂJEANU, DANIELA E. ILIE, RADU NEAMȚ

Research and Development Station for Bovine Raising – Arad, scdb@clicknet.ro

The purpose of this work was to highlight the importance of milking system on the quality and efficiency of milk production. The works were performed on 400 Romanian Simmental - Fleckvieh type cow from Research and Development Station for Bovine Raising – Arad. Milking system used consists of a milking equipment type Bradulet 2 x 14, with which milk 28 cows simultaneously. Data obtained from this study revealed a significant influence of the milking system used on the quantity, quality and economic efficiency. As a result of applying this milking technology obtain a "clean" milk, creating the possibility of placement in the quality standards imposed by the EU.

Keywords: milking facilities, milk quality, economic efficiency

STUDY REGARDING MAIN PHENOTYPIC TRAITS CHARACTERIZATION TO MILK PRODUCTION DIRECTION IN BOVINE BRUNA BREED IN MARAMURES COUNTY

STUDIU PRIVIND CARACTERIZAREA PRINCIPALELOR ÎNSUȘIRI FENOTIPICE ÎN DIRECȚIA PRODUCȚIEI DE LAPTE A TAURINELOR DE RASA BRUNĂ, CRESCUTE ÎN JUDEȚUL MARAMUREȘ

Z. MARCHIS, O. NEGREA, DANIELA LADOSI, A. CÎMPEAN

University of Agronomic Sciences and Veterinary Medicine, Cluj-Napoca

In this work paper are presented and done the analysis of the main phenotypic traits values in bovines of Bruna breed, in Maramures county, established basing on data from evidences belonging to Animal Husbandry Amelioration and Reproduction Offices in Maramures county, after data bank of ANARZ and after primary evidences from every selection center. Researches were done on a total live stock of 2632 cows, Bruna breed, bred in Maramures county. Main productive traits were established in dynamic on 6 lactations, having in view milk quantitative and qualitative production during normal and total lactations, but also reproduction index. Researches done regarding main productive traits have led to Bruna breed bovine characterization per total population, in Maramures county. The analysis of milk production index and variability on successive lactations shows us that the population taken in study is characterized by favorable productive traits such as milk quantitative production report as also on qualitative production. Concerning reproduction index researches done in farms from Maramures county localities have put in evidence the fact that average values of reproduction index (age of first parturition, mammary repose, calving interval and service period) certify an adequate state of reproduction function.

Keywords: bovine Bruna, phenotypic, milk, Maramures.

ANALYSIS OF POLYMORPHISM OF ALPHA S1 CASEIN OF SLOVAK PINZGAU CATTLE BY PCR-RFLP

ANALIZA POLIMORFISMULUI GENEI CAZEINEI α S1 PRIN METODA PCR – RFLP LA RASA PINZGAU SLOVACĂ

MARTINA MILUCHOVÁ, ANNA TRAKOVICKÁ, M. GÁBOR

Slovak University of Agriculture in Nitra, martina.miluchova@centrum.sk

The work was oriented to identification of α -s1 casein gene polymorphism and analysis of genotype structure in population of Slovak Pinzgau cattle. The material involved 93 cattle. Bovine genomic DNA was isolated by fenol-chlorophorm deprotenization and ethanol precipitation and used in order to estimate α -s1 casein genotypes by means of PCR-RFLP method. The PCR products were digested with MaeIII restriction enzyme. In the population included in the study there were homozygote genotype BB (81 animals) and heterozygote genotype BC (12 animals). Homozygote genotype CC has not been observed. In the total population of cattle homozygotes BB – 0.871 were the most frequent, while BC – 0.129 were the least frequent ones. This suggests a superiority of allele B – 0.9355.

Key words: cattle, PCR-RFLP, α -S1 casein

ANALYSIS OF POLYMORPHISM OF BETA CASEIN OF SLOVAK PINZGAU CATTLE BY PCR-RFLP FOR ALLELS A1 AND A2

ANALIZA POLIMORFISMULUI GENEI β -CAZEINEI PRIN METODA PCR- RFLP PENTRU ALELELE A1 ȘI A2 LA TAURINELE DE RASĂ PINZGAU SLOVACĂ

MARTINA MILUCHOVÁ, ANNA TRAKOVICKÁ, M. GÁBOR

Slovak University of Agriculture in Nitra, martina.miluchova@centrum.sk,

The work was oriented to identification of β -casein gene polymorphism and analysis of genotype structure in population of Slovak Pinzgau cattle. The material involved 89 cattle. Bovine genomic DNA was isolated by fenol-chlorophorm deprotenization and ethanol precipitation and used in order to estimate β -casein genotypes by means of PCR-RFLP method. The PCR products were digested with DdeI restriction enzyme. In the population included in the study there were homozygote genotype A1A1 (27 animals), heterozygote genotype A1A2 (46 animals) and homozygote genotype A2A2 (16 animals). In the total population of cattle heterozygotes A1A2 – 0.5168 were the most frequent, while homozygotes A2A2 – 0.1798 were the least frequent ones. This suggests a slight superiority of allele A1 – 0.5618.

Keywords: cattle, PCR-RFLP, β -casein

THE EVIDENCE OF THE MAIN CHARACTERISTICS OF COW MILK IN FUNCTION OF QUALITY CLASS

EVIDENȚIEREA PRINCIPALELOR ÎNSUȘIRI ALE LAPTELUI DE VACĂ ÎN FUNCȚIE DE CLASA DE CALITATE

VIOARA MIREȘAN, CAMELIA RĂDUCU, S. DĂRĂBAN, AURELIA PECE, C. COROIAN

*University of Agricultural Sciences and Veterinary Medicine, Faculty of Animal Science and Biotechnologies, 3-5 Manastur Street, 400372, Cluj-Napoca, Romania
vmiresan@yahoo.com*

The main objective of the researchers was the evidence of phisico-chemical parameters of milk and the classification of it in classes. The quality parameters are given by the number of total germs count (TGC) and number of somatic cells (NSC). These conditions of milk quality should be a guide for every farmer in order to assess the exploitation economicity.

Keywords: cow milk, fat, protein, lactoze

RESEARCH ON WEIGHT EVOLUTION AND DAILY AVERAGE INCREASE TO FOUR DIFFERENT GROUPS OF LITTLE CROSSBREED BULLS EXPOSED TO INTENSIVE FATTENING

CERCETĂRI PRIVIND EVOLUTIA IN GREUTATE ȘI SPORUL MEDIU ZILNIC LA PATRU GRUPE DIFERITE DE TAURASI METIȘI SUPUȘI INGRĂȘĂRII INTENSIVE

I.R. MOLDOVAN, A. F. AVRAM, A. PECE, G. MUREȘAN

**University Agricultural Science and Veterinary Medicine, Faculty of Animal Husbandry and Biotechnology, 3 – 5 Mănăștur Street, Cluj-Napoca, Romania, e-mail: doc_mir2002@yahoo.com*

Research aimed to highlight the weight differences and daily growth average of four groups of little crossbreed bulls raised in the same environmental conditions and having the same feeding diet.

Farm in which they do research is TCE 3 abis SRL Piatra Neamt, located in Zanesti village at 14 km from the city of Piatra Neamt.

Location of the farm is on the old IAS Zanesti and is endowed eight shelters from which two are still functional. Shelters are divided into collective lumber rooms, on which are housed an optimal number of calves depending on their age, number varied from 25 calves at 0 - 3 months up to 6 heads during growing and finishing period when they reach weights of 600-700 kg.

Farm population is obtained with calves from reformed cows from milk farm belonging to the same company. Forage base is provided from the company's vegetable farm, farm exploits about 14,000 ha of arable land in Neamt County. Feeding (in three phases) is made with the technological trailer once-daily in morning and drinking is made at discretion at constant.

Keywords: taurine, meat, Aberdun Angus

THE STRATEGY FOR BEEF MEAT PRODUCTION IN ROMANIA

STRATEGIA PENTRU PRODUCEREA CĂRNII DE BOVINĂ ÎN ROMÂNIA

GH. NEAȚĂ, C. ȘONEA, EMILIA CIURESCU,
ELISAVETA RĂDUCĂ, V. BĂCILĂ

Genetic improvements of cattle stocks is an activity of major importance in the general strategy of animal husbandry development and it is realized through selection actions, undertaken in concordance with the official control of performance, and controlled breeding, mainly through artificial insemination. The direction of selection activities for cattle is in tight correlation with the main directions established for the breeds exploitation, which dictate both the improvements aims and the importance that each criteria has in the genetic assessment of populations. Taking into consideration, on the one hand the main directions and the aims at international level in rearing and exploiting cattle, and on the other hand, the present favorable economic environment, as well as the necessities of internal demand and of the offers and demands on the international meat market, the breeding of cattle breeds has the following main objectives:

- *using as biological material breeds with high genetic potential for meat production (mixed native breeds as well as imported breeds, specialized for meat production, such as Limousine, Charolaise, Blanc Blue Belge, Aberdeen Angus, etc);*
- *improvement of beef's competitiveness on a national and international level as well as adapting various breeds and hybrids to pedological – climate conditions from various regions of the country;*
- *improvement of the average level of production performance per head, and at the same time improvement of the genetic potential for meat production according to breed;*

drafting educational programs regarding the advantages of rearing cattle for meat and of consuming beef instead of other kinds of meat from farm animals.

PHENOTYPIC PARAMETERS OF MILK YIELD IN ROMANIAN SPOTTED BREED DAIRY HEIFERS FROM S.C. AGROSEM S.A. PIȘCHIA, TIMIȘ COUNTY

PARAMETRII FENOTIPICI AI PRODUCȚIEI DE LAPTE LA PRIMIPARELE DIN RASA BĂLȚATĂ ROMÂNEASCĂ DE LA FERMA S.C. AGROSEM S.A. PIȘCHIA, JUDEȚUL TIMIȘ

GHEORGHE NISTOR¹, ELEONORA NISTOR¹, V. BAMPIDIS²,
B. SKAPETAS²

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, Romania

²Alexander Technological Educational Institute (A.T.E.I.) of Thessaloniki, Greece
gelu_nistor@yahoo.co.uk

Milk production and milk composition were studied in a population of 95 Romanian Spotted breed in the first lactation. Data were taken from the evidence of Timișoara Center of improvement and reproduction and were statistical work out for estimation of: arithmetic mean (X), sum of the squares of the values (Sx^2), variance of a set of sample values (S^2), standard error of the mean (SX) and the coefficient of variability (CV). The average milk yield of primiparous cows was of 4523.84 ± 86.85 kg; average fat yield was of 176.44 ± 3.44 kg, while protein mean yield was 147.21 ± 2.98 kg. Results obtained shows that, in the farm there is group of primiparous cows with very good yield of milk, fat and protein that can became dams. The high potential for milk, fat and protein yield estimated in studied dairy heifers' population make up the base for genetic improvement of the Romanian Spotted breed from the west of the country.

Key words: primiparous, milk, fat, protein, selection

PHENOTYPIC CORRELATION BETWEEN COUPLE OF MILK PRODUCTION TRAITS IN ROMANIAN SPOTTED BREED DAIRY HEIFERS FROM S.C. AGROSEM S.A. PIȘCHIA, TIMIȘ COUNTY

CORELAȚII FENOTIPICE ÎNTRE PERECHI DE CARACTERE ALE PRODUCȚIEI DE LAPTE, LA PRIMIPARELE DIN RASA BĂLȚATĂ ROMÂNEASCĂ DE LA FERMA S.C. AGROSEM S.A. PIȘCHIA, JUDEȚUL TIMIȘ

GH. NISTOR¹, ELEONORA NISTOR¹, V. BAMPIDIS², B.SKAPETAS²

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, Romania

²Alexander Technological Educational Institute (A.T.E.I.) of Thessaloniki, Greece
gelu_nistor@yahoo.co.uk

*The aim of the study was to establish the phenotypic correlations between milk yield parameters of 95 Romanian Spotted breed dairy heifers and their subsequent milk yield and composition in the first lactation. Correlation coefficients among estimated milk, fat and protein yields were high and almost the same. Between milk and fat yield there was a positive and very high correlation ($r = 0.9873^{***}$). Also the correlation coefficient ($r = 0.9719^{***}$) registered for the couple of traits milk and protein yield was high, while between fat and protein yield the correlation coefficient had a value of 0.9568^{***} . The strong positive correlations among couple of traits show that these can be improved in the dairy heifers, using selection by independent culling levels.*

Keywords: dairy heifers, correlations, milk, fat, protein

THE RESISTANCE TO ANTIBIOTICS IN STRAINS OF E. COLI AND ENTEROCOCCUS SP. ISOLATED FROM RECTAL SWABS OF LAMBS AND CALVES

REZISTENTA LA ANTIBIOTICE A E. COLI ȘI ENTEROCOCCUS SP. IZOLAȚI DIN FECALE DE LA MIEI ȘI VIȚEI

IVANA NOVÁKOVÁ, MIROSLAVA KAČÁNIOVÁ, P. HAŠČÍK, SIMONA PAVLIČOVÁ, L. HLEBA

*Slovak University of Agriculture, Tr. A. Hlinku 2, 949 11 Nitra, Slovak Republic
ivana.novakova@uniag.sk*

The aim of this study was to determine the prevalence and antibiotic resistance of enterococci and E. coli strains isolated from dairy calves and lambs. Susceptibilities of isolated enterococci were tested using the disk diffusion method. The interpretation of inhibition zones around the disks was according to CLSI 2004 Performance standards for antimicrobial susceptibility testing. In our study, all isolates (E. coli and enterococci) were multiresistant (100%) to tetracycline, streptomycin and compound sulphonamides. Lower levels of resistance to enrofloxacin were noted. Antimicrobial resistance profiles of Enterococcus sp. isolated from lambs indicated that the highest percentage of susceptibility was exhibited to tetracycline (100%) and streptomycin (100%) and compound sulphonamides (100%). The intermediate resistance was exhibited against compound enrofloxacin (80%). The high frequencies of resistant isolates of Enterococcus sp. from calves were documented in tetracycline (100%), streptomycin (100%) and compound sulphonamides (100%) and enrofloxacin (50%). The high percentage (compound sulphonamides-100%, tetracycline-100% and streptomycin-100%) of multiresistant E. coli (isolates from dairy calves) was noticed. There were no significant correlations between groups.

Keywords antibiotic resistance, E. coli, Enterococcus sp., lambs, calves

MORPHOMETRIC EVALUATION OF UDDERS IN JERSEY COWS

EVALUAREA UGERELOR PRIN SOMATOMETRIE LA VACI DE RASĂ JERSEY

MARTINA ORBÁN, L. GULYÁS, SZABINA NÉMETH, Z. GERGÁ CZ

*University of West Hungary - Faculty of Agricultural and Food Science- Institute of Animal Science,
H-9200 Mosonmagyaróvár, Vár 4. Hungar
orbanmartina@freemail.hu*

The authors held an udder morphology inquiry in a domestic first lactation Jersey pedigree cow flock (n=268). Author's aim was after collecting the udder's morphological characters together to find relation between the udder's different parameters, such as udder depth, distances of the two forwards, two backwards, forward-backwards teats, length and diameter of the teats, as well as the milk's somatic cell number. The udder area bordered by teats (cm²) and the teats' volume (cm³) were calculated with using the formulas created by the authors. The examine cow flock showed in cases of udder depth 37.2-39.0 cm, of the distance of the two forward teats 15.24-16.70 cm, in case of the backward teats the same distance was 8.16-10.43 cm, of the forward and the backward teats 12.60-14.17 cm, of the length of teat 5.03-5.43 cm and of the teat's diameter 18.12-18.8 cm rates. The average somatic cell number was 238 thousand/ml. Statistically proved (P<0.05) negative coherence was observed on the flock level as well as in case of troops of bull descendants between the somatic cell number and the udder depth (r =-0.12), - the distance of the two forward teats (r =-0.22), - the distance of the two backward teats (r =-0.26), the distance of the forward and the backward teats (r =-0.25) and between the diameter of udder teats (r =-0.21). The results of the inquiries call attention to the fact, that the somatic cell number's fluctuation can be determinate beside by many other influential facts (eg. feeding, milking and farming technology, management) also by the udder morphology.

Key words: Jersey, udder morphology, teat's distance, teat's length, teat's diameter, somatic cell number

RESULTS REGARDING THE EFFECT OF VARIOUS FACTORS ON THE MAIN QUANTITATIVE AND QUALITATIVE TRAITS OF MILK TO A POPULATION OF ROMANIAN COW BREED

REZULTATE PRIVIND EFECTUL UNOR FACTORI ASUPRA PRINCIPALELOR ÎNSUȘIRI CANTITATIVE ȘI CALITATIVE ALE LAPTELUI LA O POPULAȚIE DE TAURINE BĂLȚATĂ ROMÂNEASCĂ

CAMELIA RĂDUCU, VIOARA MIREȘAN, AURELIA PECE, C. COROIAN, DANA PUSTA, O. NEGREA

*University of Agricultural Sciences and Veterinary Medicine, Faculty of Animal Science and Biotechnologies, 3-5 Manastur Street, 400372, Cluj-Napoca, Romania
craducu@yahoo.com*

The study intends to be a further of a more complex one, as regards on the main quantitative and qualitative traits of milk to a romanian population of cow, which is exploited mainly in the central region of Romania.

Key words: milk, cow, fat, protein, lactose

RESEARCH ON SUBLINICAL MASTITIS EFFECT ON MILK QUALITY

CERCETĂRI PRIVIND EFECTUL MAMITELOR SUBCLINICE ASUPRA CALITĂȚII LAPTELUI

C. ȘONEA, D. COLCERI, V. BĂCILĂ

A.N.A.R.Z., Șoseaua Bucureșt-Ploiești, km. 18,2 Balotești, jud. Ilfov, www.anarz.eu, email: anarz@anarz.eu

Having considered that mastitis are the most costly disease in dairy farms, the present study was conducted in order to emphasize the effect of subclinical mastitis on milk composition and hygiene. On this purpose, large amounts of statistical data were analyzed, including all three main bovine breeds in Romania. Firstly, mastitis causing factors have been studied (breed, age, season, milking system. Afterwards, comparative study was achieved on fat, protein, lactose, salts). A significant increase in salts concomitantly with decreasing lactose percent has been revealed. Pathogen involved in subclinical mastitis has been also analyzed. According to our research, defectuous mechanical milking is the most frequent cause of subclinical mastitis occurrence.

Keywords: subclinical mastitis, milk quality, milk chemical composition, salubrity

VALUES OF SOME PHENOTYPIC, GENOTYPIC AND ENVIRONMENTAL CORRELATIONS BETWEEN MILK QUANTITY AND SOME UDDER CHARACTERISTICS, IN COWS

VALORILE UNOR CORELAȚII FENOTIPICE, GENOTIPICE ȘI DE MEDIU, DINTRE CANTITATEA DE LAPTE ȘI UNELE ÎNSUȘIRI ALE UGERULUI LA VACI

ANGELA STOICA, PAULA POȘAN, ELENA SORCA

USAMV – Bucharest, Faculty of Animal Science, pauladragut@yahoo.com

There were done measurements of mammary gland (body and teats) and there were calculated some indices and correlation coefficients. The results show that the phenotypic correlations for milk quantity and udder shape, udder length and for milking speed and distance between posterior teats and distance between anterior and posterior teats, were positives. For milk quantity and udder depth and for milking speed and mammary index the phenotypic correlations were negatives. Genotypic correlations were generally negatives for milk quantity and udder characteristics, excepting the udder width correlation which was positive. The milking speed was negatively correlated with udder shape and positively with mammary index. Environmental correlations of milk quantity with udder characteristics were all positive. Environmental correlations of milking speed with udder shape and distance between posterior teats were positives and negative for distance between anterior and posterior teats and mammary index.

Keywords: correlations, udder, cows

SEASON INFLUENCE ON DRINKING BEHAVIOR IN THREE MONTHS OF AGE CALVES FROM ROMANIAN BLACK AND WHITE BREED

INFLUENȚA SEZONULUI ASUPRA COMPORTAMENTULUI DE ADĂPARE LA TINERETUL DE RASĂ BĂLȚATĂ CU NEGRU ROMÂNEASCĂ ÎN VÂRSTĂ DE 3 LUNI

TRIPON I., STANCIU G., ACATINCĂI S., CZISZTER L. T., GAVOJDIAN D., BAUL SIMONA, BOGNAR A., ERINA SILVIA

Faculty of Animal Sciences and Biotechnologies, Timișoara, România, iuliantripon@yahoo.com

The aim of this paper was to measure the main aspects that characterize the drinking behavior of three months old calves. During the experiments the following drinking behavior aspects were determined: number of drinking periods, the length of drinking periods. Results showed that in the winter season the total length of drinking periods was 7.0 minutes in the morning, 5.1 minutes in the afternoon and 2.4 minutes during the night. In the summer (high temperatures) the total length of drinking periods was 7.9 minutes in the morning, 10.0 minutes in the afternoon and only 4.0 minutes during the night. In the summer (normal temperatures) the total length of drinking periods was 5.8 minutes in the morning, 7.9 minutes in the afternoon and only 4.4 minutes during the night. Calves spent drinking on average 14.5 minutes in the winter, representing 1% of a day length. Calves spent drinking on average 21.9 minutes in the summer when the temperatures were very high, respectively 1.5% of a day length. Calves spent drinking on average 18.1 minutes during the summer when temperatures were normal (1.3%).

Keywords: calves, drinking behavior, Romanian Black and White breed

GRAZING BEHAVIOUR OF DAIRY COWS ON MOUNTAIN FARM

COMPORTAMENTUL PE PĂȘUNE AL VACILOR DE LAPTE DIN FERMELE SITUATE ÎN ZONA DE MUNTE

J. VOŘÍŠKOVÁ, M.ŠLACHTA, B. ČERMÁK, M. MARŠÁLEK, J. FRELICH

University of South Bohemia, Faculty of Agriculture, Czech Republic

The etological observation was provided on a dairy herd (65 Czech Fleckvieh and 51 Holstein cows) on a low-input mountain farm during the pasture season (April – October 2008). The milking was provided two-times a day in the stalls. The 24-hours observations were made four-times: in June, July, September and October, in 10-minutes intervals. The cows spent 25 to 38 % of a day on average by feeding and 18 to 22 % on average by moving (stalls – pasture movements took about half of this period). The resting time consisting of chewing was found insufficient and took 29 % to 40 % of a day on average. Better comfort of cows given by an improved milking technology and a more effective grazing management connected with longer time spent by resting is suggested to achieve higher milk yields on the farm.

Keywords: cattle, mountains, pasture, behaviour

STUDIES REGARDING THE DURATION OF MAINS MAINTENANCE ACTIVITIES ON CHINCHILLAS BREED IN INTENSIV SYSTEM

STUDII PRIVIND DURATA PRINCIPALELOR ACTIUNI DE INTRETINERE A CHINCHILLELOR CRESCUTE ÎN SISTEM INTENSIV

C. CĂLĂMAR, M. BURA, SILVIA PĂTRUICĂ, I. BĂNĂTEAN – DUNEA, ANDREEA CĂLĂMAR

Faculty of Animal Sciences and Biotechnologies, Timișoara, România; calincalamar@yahoo.com

The study was made in 2008 and his purpose was to establish the period of time necessary to execute the main services in a chinchilla farm in order to do the standardisation of work and to establish the payment

It has been determined the period of time necessary for giving the hay, the fodder, the water, checking the animal births, spreading out the sand, etc., wich was 3 hours and 25 minutes.

3 workers participated in this daily program, so wich one of them worked for 3 hours and 8 minutes every day.

Keywords: daily, maintenance, chinchilla, program, time.

STUDY CONCERNING QUANTITATIVE SPLANCHNOLOGY ON CHINCHILLA

STUDIUL PRIVIND SPLANCHNOLOGIA CANTITATIVĂ LA CHINCHILLA

C. CĂLĂMAR, M. BURA, GABI DUMITRESCU, I. BĂNĂȚEAN-DUNEA, SILVIA PĂTRUICĂ, ANDREEA CĂLĂMAR

*Faculty of Animal Sciences and Biotechnologies, Timișoara, România
calincalamar@yahoo.com*

The study was carried out using a number of 14 chinchillas, 12 males and 2 females. The purpose was to determine the slaughter parameters. The main characteristics used on the study were: different organs weight and size.

The mean weight of the group before slaughtering was 458.33 g and after slaughtering 352.5 g.

It has been noticed that the measurements taken in the study were positively correlated.

Keywords: internal organs, chinchilla, splanchnology.

DETECTION OF SRY OF NEWBORN RABBITS MENT FOR XENOIMPLANTATES

DETECTAREA SRY LA IEPURI NOU NĂSCUȚI DESTINAȚI XENOIMPLANTURILOR

ALICA RAFAYOVÁ¹, ANNA TRAKOVICKÁ¹, V. PARKÁNYI³,
A. KOVÁČIK²

1 – Slovak University of Agriculture in Nitra, Faculty of Agrobiological Sciences, Department of genetics and breeding biology

2 – Slovak University of Agriculture in Nitra, Faculty of Biotechnology and Food Science, Department of animal physiology

3 – Animal Production Research Centre Nitra, Institute of Small Farm Animals

Contact: alica.rafayova@mail.com

The aim of this study was sex-detection of newborn rabbits with molecular-genetics analyses of SRY (specific region of Y chromosome) sequence. This region is present only in male animals, in females is missing. We analysed 16 newborn rabbits (native in two litters of females lines P91 and M91) by using polymerase chain reaction with specific primers. PCR product was visualised at 3% agarose gel. SRY – PCR fragment (242 bp) was detected in 8 animals, 8 animals had no fragment present. All young were evaluated according to outer genitals at 3 weeks of age. This technology provides partly selective tool for categorization of the females and males in further reproductive process. Both sexes of newborn rabbits can be used for control of production of special enzymes under genetic control of the gonosomes and also in human medicine for application of xenoimplantates.

Keywords: sex – detection, SRY, rabbit

DETECTION OF MSTN POLYMORPHISM IN RABBIT

DETECTAREA POLIMORFISMULUI MSTN LA IEPURI

ALICA RAFAYOVÁ, ZUZANA LIESKOVSKÁ, ANNA TRAKOVICKÁ,
A. KOVÁČIK

Contact: alica.rafayova@gmail.com

Myostatin is negative regulation factor, which determine maximal amount of body mass typical for every species. If there is a mutation in myostatine, its negative regulation function is disrupt. MSTN is important candidate gene for meat production. In rabbit it is known sequection of exon 1, 2, 3 and intron 1, 2. No mutation is observed, only one SNP in intron 2, C-T transition in position 34. We analysed 127 broiler rabbits linea M91 and P91 using PCR-RFLP. We noted slight majority of genotype CT (0,4567) over genotype TT (0,4409) and low frequency of genotype CC (0,1024). From this results also higher distribution of allele T, with frequency 0,6693 was observed. Differences between theoretical and experimental genotypes frequencies does not exceed the χ^2 - test affirm, so we can assume a genetic equilibrium state in assessed group. Experimental heterozygosity (0,4667) was higher than theoretically expected (0,4427). Level of Polymorphism Information Content (PIC) was 0,3447. On the basis od PIC and EA we can claim, that genetic diversity of locus MSTN is not decreased. It is needed to continue with studying of MSTN gene.

Keywords: rabbit, MSTN

ANALYSIS OF THE FACTORS THAT INFLUENCE CONFORMATION TRAITS IN BLUE FOX (*ALOPEX LAGOPUS L.*)

ANALIZA FACTORILOR CARE INFLUENŢEAZĂ TRĂSĂTURILE CONFORMAŢIONALE LA VULPEA ALBASTRĂ (*ALOPEX LAGOPUS L.*)

S. SOCHA, MARZENA STĘPIEŃ, EWELINA KONOPKA, DANUTA WÓJCIK, DOROTA KOŁODZIEJCZYK, ALDONA GONTARZ

Department of Breeding Methods, Poultry and Small Ruminant Breeding, University of Podlasie, ul. B. Prusa 14, 08-110 Siedlce, Poland, e-mail: socha@ap.siedlce.pl

*The present work aims at the analysis of the factors that influence animal size and fur quality in blue fox (*Alopex lagopus L.*). The data proceeds from a breeding farm situated in central Poland and concerns three years. The analysis of variance indicates statistically significant effect of the year of birth on animal size, fur quality and colour purity. The birth term had no statistical influence on the analysed traits. Animal sex had significant influence on the following traits: animal size, fur quality and total score. The interactions between year and animal sex, year and date of birth, as well as animal sex and the date of birth did not have statistically significant effect on the measured traits. Estimated phenotypic correlations in the analysed herd ranged from negative to positive. The highest correlations occurred between fur quality and total score (0.800), while the lowest between animal size and fur quality (-0.600). The foxes from the analysed breeding farm were characterised by good parameters of fur and are good breeding material.*

Keywords: blue fox, animal size, fur quality, variability

THE ANALYSIS OF THE FACTORS THAT INFLUENCE THE FERTILITY IN THREE COLOUR TYPES OF CHINCHILLA

ANALIZA FACTORILOR CARE INFLUENŢEAZĂ FERTILITATEA LA TREI TIPURI DE CHINCHILLA

S. SOCHA, DANUTA WÓJCIK, EWELINA KONOPKA

Department of Breeding Methods, Poultry and Small Ruminant Breeding, University of Podlasie, ul. B. Prusa 14, 08-110 Siedlce, Poland, e-mail: socha@ap.siedlce.pl;

The aim of the work was to analyse the fertility of females in chinchilla. The number of born and raised animals was analysed in standard, beige and black velvet chinchilla. The analysis of variance considered the influence of the colour type, the year and animal age. The analysis proved statistically significant influence of all the factors on the number of born and raised puppies. The highest fertility characterised standard females, then, beige, and the lowest, black velvet. The mean number of born in one litter was 2.10 in standard and less than 1.50 in black velvet. The mean number of raised was the highest in standard, 1.70. Variability coefficient ranged from 34% to 46% in the number of born and from 46% to 61% in the number of raised, depending on colour type and the year. Phenotypic correlations: high and positive correlations were estimated between the number of born and raised (0.641), which proves that the same females were characterised of both higher number of born and raised puppies. These estimators prove that genetic base had low but significant influence on fertility in chinchilla females.

Keywords: chinchilla, colour type, fertility, variability

EFFECTS OF TRANSPORTATION STRESS ON SOME PHYSIOLOGICAL INDICATORS IN SPORT HORSES

EFACTELE STRESULUI DE TRANSPORT ASUPRA UNOR INDICATORI FIZIOLOGICI LA CAII DE SPORT

IOANA ANDRONIE¹, MONICA PÂRVU¹, V. ANDRONIE¹, ADINA CIUREA²

¹Spiru Haret University, Faculty of Veterinary Medicine, Bucharest Romania, ² Sanitary Veterinary National Authority and Food Safety, ioanaandronie@innovet.ro

Our research monitored the response of some welfare indicators in sport horses during transport by assessing the intensity of stress during travel time, changes in heart rate, cortisol, lactic acid and creatinine levels. The horses included in the study were separated into 2 groups: horses that were transported for the first time (A n: 12) and horses that had been previously transported (B n: 10).

The values of the indicators varied between the two groups regardless of the fact that travel length and transport conditions were almost identical. The heart rate and cortisol levels were elevated in horses from group A as compared to the ones in group B while the latter showed increased levels of these indicators upon repeating the loading and unloading (100-130 nmol/l). The recorded value of lactic acid was higher for the first group (2,2 mmol/l), only until the moment when the horses adapted to the effort, after which it decreased (1,8 mmol/l).

Transport of horses under certain conditions related to their adjusting to manhandling during loading and unloading operations, as well as the animals' temper, may be considered a stress factor with significant depreciating effect on horse welfare.

Keywords: horse, stress, transportation, and welfare

STUDIES ON THE RELATIONSHIP BETWEEN SOME MORPHOLOGICAL CHARACTERS AND JUMPING PARAMETERS OVER A VERTICAL FENCE IN SPORT HORSES

STUDIUL RELAȚIEI DINTRE UNELE CARACTERE MORFOLOGICE ȘI PARAMETRII SĂRITURILOR PESTE STAȚIONATĂ LA CAII DE SPORT

FLAVIA BOCHIȘ

*Faculty of Animal Science and Biotechnologies, Timișoara, România
flavia25cai@gmail.com*

Looking for the form-function principle, the present study proposed to analyze the morphological traits of the equine athletes and the jumping over obstacles parameters. The intension was to focuses some guide lines in selecting the future potential champion. Indeed, this is only a basic item, not a guarantee, in a future career, where a lot of aspects take part. Even that, if a horse had a good rider and an excellent trainer, if it is not described by some basic biometrical and biomechanical reports (Duel, 1987, Lewczuk, 2002), it is impossible to reach very good results. In most of cases, when horses refused some exercising elements, we think about temperament, but in the same time, the aspect could be generated by a pain, or effectively by them incapacity due to an equilibrium fault (Lagarde, 2005).

Keywords: sport horse, jumping parameters, vertical fence.

THE ABSOLUTE GROWTH AND THE GROWTH COEFFICIENTS OF THE MAIN CORPORAL SIZES ON ACTUAL YOUTH ARDENEZ MALE COMPARED WITH THE YOUTH ARDENEZ MALE BREED IN 2002 ON IZVIN STUD, TIMIS DISTRICT

SPORUL ABSOLUT ȘI COEFICIENȚII DE CREȘTERE AI PRINCIPALELOR DIMENSIUNI CORPORALE LA TINERETUL MASCUL ARDENEZ ACTUAL COMPARAT CU TINERETUL MASCUL ARDENEZ CRESCUT ÎN ANUL 2002 LA HERGHELIA IZVIN, JUD.TIMIȘ

I. TĂPĂLAGĂ¹, MARIOARA NICULA¹, D. DRONCA¹, C. BUZATU²

¹ *Faculty of Animal Sciences and Biotechnologies, Timișoara, România,*

² *Izvin Stud, Timiș district*

The purpose of this paper is to observe the development degree under the morphological aspect at Ardenez horses from Izvin Stud. For this we have observed 8 exterior indicators on horses starting from 0-6 months to adult ones. The research was made on strength of 49 horses Ardenez thoroughbred, where absolute growth and the growth coefficients of the main corporal dimensions were calculated for the actual young Ardenez horses, compared with the absolute growth and the growth coefficients of the main corporal dimensions for young Ardenez horses raised in 2002 at Izvin Stud. As a result of the research, we've find that the growth of the main corporal dimensions on young horses is influenced by internal and external factors. From the internal factors, the precocity specific for the heavy thoroughbred, has influence upon the growth of the main corporal dimensions, thus at the age of 3, some of this dimensions stop their growth. A special influence upon the growth is exerted by the appearance of the sexual maturity, factor that makes corporal dimensions to vary between sexes, after the installation of the secondary sexual characters.

Key words: Ardenez horses, absolute growth, growth coefficients, corporal sizes

EFFECTS OF GENOTYPES *LEPR* AND *MC4R* ON PIGS PRODUCTION EFFECTUL GENOTIPURILOR *LEPR* ȘI *MC4R* ASUPRA PRODUCȚIEI DE SUINE

A. KOVÁČIK¹, ANNA TRAKOVICKÁ², J. BULLA¹, B. BOBČEK³, ALICA RAFAYOVÁ²

1-Department of Animal Physiology, Faculty of Biotechnology and Food Sciences, Slovak University of Agriculture in Nitra

2-Department of Genetics and Breeding Biology, Faculty of Agrobiology and Food Resources, Slovak University of Agriculture in Nitra

3-Department of Animal Husbandry, Faculty of Agrobiology and Food Resources, Slovak University of Agriculture in Nitra

Contact: anton.kovacik@yahoo.com

*The aim of this study was to identify polymorphism in *LEPR* and *MC4R* genes and evaluate some production traits in 102 pigs. Genotyping of pigs was done by PCR – RFLP methods. Into the set of 102 pigs were found three genotypes AA(14), AB(32) and BB(56) for *LEPR* gene and AA(46), AG(37) and GG(19) for *MC4R*. Differences between genotypes were detected. The high determination coefficient was confirmed (0,68 – 0,79). Choises model was statistically highly significant and highly significant *LEPR* and *MC4R* genes effect was confirmed for backfat thickness (BFT). Also this study published polymorphism of these genes and their effect on production traits of pigs (mainly lean meat - LM and average daily gain - ADG). The results were obtained on small number of animals and the results have to be confirmed on larger number of animals.*

Key words: pig production, *LEPR*, *MC4R*

THE EFFECTS OF SODIUM SELENITE AND SELENIZED YEAST SUPPLEMENTATION INTO THE DIET ON LAYING HENS BODY WEIGHT EFFECTUL SUPLIMENTĂRII RAȚIEI CU SELENIT DE SODIU ȘI DROJDII CU SELENIU ASUPRA MASEI CORPORALE A GĂINILOR OUĂTOARE

HENRIETA ARPÁŠOVÁ¹, MIROSLAVA KAČÁNIOVÁ², P.HAŠČIK³, M.FÍK¹

¹Department of Poultry Science and Small Animal Husbandry

²Department of Microbiology

³Department of Animal Products Evaluation and Processing

Slovak Agricultural University, Tr. A. Hlinku 2, 949 76 Nitra, Slovak Republic

¹Address correspondence to Henrieta Arpasova, Department of Poultry Science and Small Animal Husbandry, Slovak Agricultural University in Nitra, Tr. A. Hlinku 2, 949 76 Nitra, Slovak republic, +421376414314; E-mail henrieta.arpasova@uniag.sk

In this experiment the effects of supplementation of the diet for laying hens with sodium selenite (SS) or selenized yeast (SY) on body weight of laying hens was studied. The chickens of Shaver Starcross 288 hybrid were randomly divided at the day of hatching into 4 groups (n=12; in each). The birds were fed from Day 1 of life to 9 months of age with diets differing in amounts and/or forms of selenium. Control group received basal diet (BD) containing selenium naturally occurring in feeds (0.1 mg Se/kg of dry matter (DM)). First and second experimental group of chickens were fed with a same BD enriched with equivalent dose of Se 0.4 mg/kg DM in form of sodium selenite or selenized yeast, respectively. The feed for third experimental group of birds consisted of BD supplemented with selenized yeast to the final amount of selenium 1.0 mg/kg DM. The supplementation of selenium into the diet significantly influenced the laying hens body weight for a breeding period (P<0.05). The highest body weight increase of birds was in the groups with the addition of Se-yeast at a dose of 0.4mg/kg and 0.9mg/kg. Hen's body weight (g±SD) for a breeding period was in the order of groups: 1485.19^a±177.19; 1557.39^b±146.59; 1588.71^b±184.79; 1585.93^b±198.37. Higher average body weight of hens in all experimental groups with the selenium addition was recorded in the rearing period. However, the different was statistically non significant (P>0.05). The results showed that the body weight may be positively influenced by supplementation of laying hens with selenium, especially in the form of Se-yeast.

Keywords: laying hens, sodium selenite, selenized yeast, body weight

THE EFFECTS OF SODIUM SELENITE AND SELENIZED YEAST SUPPLEMENTATION INTO DIET FOR LAYING HENS ON SELECTED QUALITATIVE PARAMETERS OF TABLE EGGS

EFECTELE SUPLIMENTĂRII RAȚIEI GĂINILOR OUĂTOARE CU SELENIT DE SODIU ȘI DROJDII CU SELENIU ASUPRA UNOR PARAMETRII CALITATIVI AI PRODUCȚIEI DE OUĂ PENTRU CONSUM

HENRIETA ARPÁŠOVÁ¹, JÁN WEIS¹, P. HAŠČÍK²,
MIROSLAVA KAČÁNIOVÁ³

*Department of Poultry Science and Small Animal Husbandry, Slovak Agricultural University

**Department of Animal Products Evaluation and Processing, Slovak Agricultural University

***Department of Microbiology, Slovak Agricultural University

Tr. A. Hlinku 2, 949 76 Nitra, Slovak Republic

In this experiment the effects of supplementation of the diet for laying hens with sodium selenite (SS) or selenized yeast (SY) on whole egg and egg shell quality of layers were studied. The chickens of Shaver Starcross 288 strain were randomly divided at the day of hatching into 4 groups (n=12; in each). The birds were fed from Day 1 of life to 9 months of age with diets differing in amounts and/or forms of selenium. Control group received basal diet (BD) containing selenium naturally occurring in feeds (0.1 mg Se/kg of dry matter (DM)). First and second experimental group of chickens were fed with a same BD enriched with equivalent dose of Se 0.4 mg/kg DM in form of sodium selenite or selenized yeast, respectively. The feed for third experimental group of birds consisted of BD supplemented with selenized yeast to the final amount of selenium 1.0 mg/kg DM. The egg weight was significantly higher in the groups with SY supplementation only. On the contrary the egg shell ratio was significantly lower in the groups with SY supplementation in both amounts. The width of egg was significantly increased in the groups with selenium supplementation in both forms. The value of egg shell strength was significantly decreased in group with SY in the highest amount 0.9 mg/kg DM. The average egg shell thickness was the highest in the experimental group with Se-yeast in amount 0.9 mg/kg DM, however different was not significant compared with control group.

The results showed that the most of selected parameters of egg quality appeared to be significantly influenced by selenium supplementation into laying hen's basal diet.

Keywords: laying hens, sodium selenite, selenized yeast, egg weight, egg shell

THE SUPPLEMENTARY DISINFECTION AND DEFENSE AGAINST NOXIOUS FUNGUS OF THE HATCHING EGGS, IMPROVEMENT FACTORS OF THE PRODUCTION

DEZINFECȚIA ȘI FUNGICIDAREA SUPLIMENTARĂ A OUĂLOR DE INCUBAT, FACTORI AMELIORATORI AI PRODUCȚIEI

I. C. BOCIOAGĂ¹, VACARU-OPRIȘ², R.M.RADU-RUSU² - ² U.S.A.M.V. Iași

¹ S.C. „AVICOLA SLOBOZIA” S.A., cipriene2002@yahoo.com

The present paper work has as a main purpose the contribution to the improvement of the eggs incubation process come from the hens appertain to heavy breed, by making some supplementary disinfections and defenses on the eggs before the incubation process. The most important part of this action are the technological changes which have determined the obtaining of some superior results at the incubation, with direct references at the eggs opening for birth percentage and the quality of the new-born chicken. Regarding the demonstrated facts, we consider that the experimental incubation technologies at allotments L1exp. – L3exp. were proved to be the best methods, making the results to be better than the ones obtained at the test allotment Lc, especially the incubation technology used on L2exp.and L3exp.

Keywords: Defense against noxious, disinfection , hatchability

SLAUGHTER AND CARCASS TRAITS OF NATIVE GEESE REARED IN MUŞ PROVINCE

ÎNSUŞIRILE LA SACRIFICARE ŞI ALE CARCASEI LA GÂŞTELE LOCALE CRESCUTE ÎN PROVINCIA MUŞ

BETÜL ÇELİK,¹ ZEHRA BOZKURT²

¹Ministry of Agriculture and Rural Affairs, Presidency Department of Publication, Ankara-TURKEY, ²Afyon Kocatepe University, Faculty of Veterinary Medicine, Department of Animal Husbandry, 03200 Afyonkarahisar, TURKEY

This study was conducted to determine the slaughter and carcass traits and the effects of sex on these traits of native geese reared in Muş. A total of 41 geese (17 male and 24 female) which were 8-10 months of age were used. The means of slaughter weight, cold carcass weight, head weight, feet weight, heart weight, liver weight, gizzard weight and spleen weight were 3968.6, 2678.7, 172.1, 131.4, 38.6, 69.3, 144.3, 2.28 g for males, and 3212.2, 2047.6, 138.5, 113.0, 24.8, 76.3, 142.2, 2.18 g for females respectively. Significant phenotypic correlation coefficients were calculated between slaughter weight and feather, head and feet weights in both sex groups and between carcass weight and feather and feet weight in only male geese. Slaughter weight was positively related with heart and gizzard weights in males, carcass weight was negatively related with liver weight in females ($r = -0.45$). In conclusion, the results of obtained in this study indicated that meat yield was low of the geese reared extensively in Muş province, the slaughter and carcass trait and the phenotypic correlations among of this traits were affected by sex.

Keywords: goose, sex, slaughter traits, carcass traits

CONTRIBUTIONS TO KNOWING THE SEGMENTED MESODERM DEVELOPMENT IN *TRANSYLVANIAN NAKED NECK BREED*

CONTRIBUȚII LA CUNOAȘTEREA MODELULUI DE DEZVOLTARE A MEZODERMULUI SEGMENTAT LA RASA DE GĂINI *GÂT GOLAȘ DE TRANSILVANIA*

D.DRONCA¹, N. PĂCALĂ¹, I. BENCSIK¹, T. OROIAN², V. CIGHI², MIHAELA IVANCIA³, GABI DUMITRESCU¹, ADA CEAN¹, LILIANA BOCA¹

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, România

²Faculty of Animal Sciences and Biotechnologies Cluj-Napoca, Romania

³Faculty of Animal Sciences Iași, Romania

In Romania, the Transylvanian Naked Neck hen breed is considered to be an “endangered” population, reason for which we consider that a special attention should have been given then until now. Plymouth Rock breed was imported for the first time to Romania from the Studler Company, France in 1969. The present work is aiming to study profoundly the development model for development at 26, 30, 40, 50 and 60 hours incubation age, in Transylvanian Naked Neck hen breed and compare it to Plymouth Rock breed. The observations are proving that in the first 60 incubation hours the segmented mesoderm morphogenesis in the two breed, is different, dictated by the two different genetic structures. It is noticeable that Transylvanian Naked Neck is characterized by a vigorous embryonic development, overcoming, the other breed tested by the age of 40 incubation hours. We estimate that the two breeds have a good combinative capacity, which recommend the utilization of these genetic materials to obtain hybrids for producing “peasant-type” chicken meat, very well-appreciated by the Europeans between the two World Wars.

Keywords: mesoderm segmentation, embryos, Transylvanian Naked Neck, Plymouth Rock

RESEARCH REGARDING THE EXISTENCE OF A PHENOTYPIC CORRELATION BETWEEN STERN LENGTH AND THE ARRIVAL TIME AT GROSSE-FOND PIGEON STOCK JAN AARDEN

CERCETĂRI PRIVIND EXISTENȚA UNOR CORELAȚII FENOTIPICE ÎNTRE LUNGIMEA CARENEI STERNALE ȘI TIMPUL DE SOSIRE ÎNTR-UN EFECTIV DE PORUMBEI CĂLĂTORI DE MARE FOND JAN AARDEN

D.DRONCA¹, N. PĂCALĂ¹, I. BENCSIK¹, T. OROIAN², V. CIGHI², MIHAELA IVANCIA³, GABI DUMITRESCU¹, ADA CEAN¹, ALEXA CRISTIAN¹, LILIANA BOCA¹

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, România

²Faculty of Animal Sciences and Biotechnologies Cluj-Napoca, Romania

³Faculty of Animal Sciences Iași, Romania

Specialty literature is presenting few data about the estimation of the phenotypic correlations at voyager pigeon. The present study is aiming to present a classic and simple method, accessible to any pigeon ameliorator. The method was used to estimate the phenotypic correlation between the length of the stern and the arrival time in an 18 individuals GROSSE-FOND pigeon stock Jan Aarden breed for a distance of 976 Km. The analyze demonstrate that at the effective studied there is a positive correlation between the two studied characters, the correlation value is was 0,885, reason for which we recommend that the breeders of Jan Aarden stock from this breed should take into the consideration the correlation when performing selection in order to obtain a greater selection effect.

Keywords: Grosse-FND pigeon, phenotypic correlation, Jan Aarden stock

ANTIBIOTIC RESISTANCE OF FAECAL ENTEROCOCCI IN DOMESTIC POULTRY AND BROILERS FROM COMMERCIAL FARMS

REZISTENȚA LA ANTIBIOTICE A ENTEROCOCILOR FECALI LA PĂSĂRILE DOMESTICE ȘI BROILERII DIN FERMELE COMERCIALE

IVANA NOVÁKOVÁ, MIROSLAVA KAČÁNIOVÁ, P. HAŠČÍK, M. KLIMENT HENRIETA ARPÁŠOVÁ

Slovak University of Agriculture, Tr. A. Hlinku 2, 949 11 Nitra, Slovak Republic, e-mail: ivana.novakova@uniag.sk

The aim of this study was to determine the prevalence and antibiotic resistance of enterococci isolated from domestic poultry, laying hens from ecological farm and broilers from commercial farms. Susceptibilities of isolated enterococci were tested using the disk diffusion method. All isolates showed some degree of multiple antibiotic resistances. The resistance to compound sulphonamides (91.891%), tetracycline (51.351%) and streptomycin (37.837%) was the most frequent. Of all isolates of Enterococcus strains 83.783% were susceptible to enrofloxacin. The susceptibility of isolates from broilers and laying hens from ecology farm to enrofloxacin were significantly higher ($P < 0.05$) than in isolates from domestic poultry. Between the others data were not significant differences.

Keywords Enterococcus sp., antibiotic resistance, broilers, hens

ESTIMATION OF THE PROCESS OF SYNTHESIS OF MEAT BROILER THROUGH MODERN METHODS

ESTIMAREA PRIN METODE MODERNE A PROCESULUI DE SINTEZĂ CORPORALĂ LA PUII BROILER

MONICA PÂRVU¹, R. BURLACU², IOANA ANDRONIE¹, VIOLETA SIMION¹, ADRIANA AMFIM

¹University Spiru Haret, FMV, Bucharest, monica_parvu@yahoo.com

²University of Agriculture Science and Veterinary Medicine Bucharest

In vivo experiments on broilers were conducted in order to elaborate a mathematical model for body synthesis, the experimental data being processed with Gompertz time functions and linear functions. The experiment used 166, Ross 308 day-old chicks through an experimental period of 42 days. The broilers received diets according to the growth period (1 – 14, 15 – 28, 29 – 42 days). The dietary energy and nutrient supply for group 1 (control) were according to the recommendation of Ross Breeders. The birds had free access to the feed. Group 2 received 90% and group 3 received 80% of the amount of feed received by group 1; the dietary energy supply was 90% in group 4 and 80% in group 5, also related to group 1. Mathematical modelling was used to evaluate the evolution of the body chemical composition (water, protein and lipid content), starting from the protein content at hatching.

Keywords: mathematical modelling, broiler, corporal synthesis

RESEARCH REGARDING SOME PHYSICAL QUALITY VALUES OF JAPANESE QUAIL EGGS OBTAINED AT THE MIDDLE OF THE LAYING STAGE

CERCETĂRI PRIVIND UNII INDICATORI FIZICI DE CALITATE AI OUĂLOR DE PREPELIȚĂ JAPONEZĂ DEPUSE ÎN PLATOU DE OUAT

ANCA TEUȘAN, V. TEUȘAN, A. A. PRELIPCEAN

University of Agricultural Sciences and Veterinary Medicine Iași, Animal Science Faculty
e-mail: anca.teusan@yahoo.com

The Japanese quail is one of the smallest bird subspecies which has been tamed by man, being industrially raised in our days in many states over the world. This avian subspecies produces over 300 eggs, and though there are about 6 races and different varieties, there are very little data in the scientific literature regarding the quality values for eggs of Japanese quail hatching eggs collected from hens at the end of the laying – physical values (pH value of the eggs components, albumen index, yolk index)

The present paper wants to bring a series of data regarding some of these indicators. The pH values was determined with an portable pH-oximeter, and to establish the other two quality indexes we used a device fitted with callipers taking into account: height of the dense egg white (albumen), minimum and maximum diameter of the dense and fluid egg white, height and the diameter of the yolk. The albumen pH recorded values of 8.90, and the yolk pH values of 6.07. The statistical mean for the 130 values of albumen index taken in study was 0.048. The mean value of yolk index was 0.399. The obtained results are normal for the period of quail's life.

Keywords: quail, egg, albumen, yolk, pH

PRODUCTION PARAMETERS OF SLOVAK NATIONAL HEN'S BREED ORAVKA

PARAMETRII PRODUCTIVI LA RASA DE GĂINI SLOVACĂ ORAVKA

J. WEIS, C. HRNČÁR

*Department of Poultry Science and Small Animal Husbandry
Faculty of Agrobiological and Food Resources, Slovak University of Agriculture,
Nitra, Slovakia, Jan.Weis@uniag.sk*

Our work describes the results of egg production and egg weight of hen's breed Oravka in years 2004 - 2008. Observation of production parameters of hen's breed Oravka realised in special poultry house for controlled breeds of poultry at University Experimental Farm in Koliňany. In analyzed period 2004 to 2008 we observed flock of breed Oravka with ten females and one male. This poultry flock was selecting from young birds per year. The egg production we evaluated as average number of eggs for accelerated 7-month laying period (1 month - 30 days). The eggs were weighed individually from every hen for period 10 days in each month. On basis of achieved results we observed progressive increase of egg production and egg weight. The egg production of breed Oravka increased about 3.10 eggs/hen (2.06 %) between years 2004 and 2008. Massive improvement we recorded at parameter of egg weight (3.30 g - 6.30 %) in analyzed period. The selection programme of breed Oravka will target the increase of egg production and egg weight in accordance with standard of breed (egg production 180 - 200 eggs, egg weight 58 g)

Keywords: poultry, Oravka, egg production, egg weight

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Keywords: poultry, Oravka, egg production, egg weight

POPULATION SIZE OF AUTOCHTHONOUS AND LOCALLY ADAPTED HEN'S BREEDS ON AREA OF THE SLOVAK REPUBLIC

MĂRIMEA POPULAȚIEI LA RASELE DE GĂINI AUTOHTONE ȘI ADAPTATE LA CONDIȚIILE LOCALE DIN REPUBLICA SLOVACIA

J. WEIS, C.HRNČÁR

*Department of Poultry Science and Small Animal Husbandry
Faculty of Agrobiological and Food Resources, Slovak University of Agriculture,
Nitra, Slovakia, Jan.Weis@uniag.sk*

On basic certificates about acceptance of Oravka Plymouth Rock, Rhode Island, New Hampshire, White Leghorn, Brown Leghorn and Sussex, controlled flocks of Slovak Union of Breeders, we analyzed total number of birds, number of breeding males, number of breeding females and effective population size by Simon and Buchenauer (1993) and we evaluated the populations of observed hen's breeds to categorisations by Scherf (2000). The highest number of birds we recorded at breed New Hampshire from observed hen's breeds. Average total number of animals in period of year 2003 - 2008 was 1373 birds with average effective population size 445.103. However, the population of New Hampshire poultry in Slovakia was evaluating by massive decrease in last years as a endangered - maintained breed for which an active conservation programme is in place. By contrast, the smallest number of animals was detected at breed White Leghorn with average total number 18.83 birds in period of year 2003 - 2008 and average effective population size 6.605. The breed White Leghorn in Slovakia we categorized to critical breed. National legislation on Slovakia has been created, the first experience is being gathered and the European legislation is coming in practice. The conditions for the development and preservation of endangered breeds of poultry in Slovak Republic in the long term are being put in place by means of creative and well aimed utilisation of European and national legislation.

Keywords: poultry, breed, male, female, effective population size

EFFECTS OF HEN AGE, STORAGE PERIOD AND STRETCH FILM PACKAGING ON INTERNAL AND EXTERNAL QUALITY TRAITS OF TABLE EGGS

EFFECTUL VÂRSTEI GĂINILOR, A DURATEI DE DEPOZITARE ȘI A AMBALĂRII CU FOLIE ELASTICĂ ASUPRA ÎNSUȘIRILOR CALITATIVE INTERNE ȘI EXTERNE ALE OUĂLOR DE CONSUM

AHMET ALPER YILMAZ¹, ZEHRA BOZKURT²

¹*Tiryakioğlu Feed Marble Limited- Afyonkarahisar-TURKEY*

²*Afyon Kocatepe University, Faculty of Veterinary Medicine, Department of Animal Husbandry, 03200 Afyonkarahisar, TURKEY*

The effects of hen age, storage time and packaging with stretch film applications to the internal and external egg quality of table eggs were investigated. A total of 1680 table eggs were used and collected with two commercial layer stocks (Lohmann White) 28 and 80 weeks old age. A half of the table eggs packaged with stretch film and all eggs were stored 0, 15, 30 and 45 days at 22 °C ve 45 % RH. Egg weight, shape index, albumen index, fracture strength, albumen index, yolk index Hauhg unit, yolk color, shell weight, shell thickness, shell weight per unit surface of shell and shell density were examined in the study. Egg weight, egg weight loss, shell weight, albumen index, yolk index, Haugh unit, shape index, shell strength, shell thickness, shell density values were found as higher in the young hen flocks' eggs. Egg weight loss, shell strength, shell thickness, egg weight, shell density increased and egg weight, albumen index, yolk index and Haugh Units and shell weigh decreased as storage time increased. Packaging eggs with stretch film reduced the internal quality losses resulted from prolonged storage.

Keywords: table egg, hen age, storage time, stretch film, quality

ANALYSIS OF POLYMORPHISM OF CAST GENE AND CLPG GENE IN SHEEP BY PCR-RFLP METHOD

ANALIYA POLIMORFISMULUI GENELOR CAST ȘI CLPG LA OI PRIN METODA PCR-RFLP

M. GÁBOR, ANNA TRAKOVICKÁ, MARTINA MILUCHOVÁ

Slovak University Of Agriculture In Nitra
misogabor@yahoo.com

The work was oriented to identification of calpastatin gene polymorphism and callipyge gene polymorphism and analysis of genotype structure in population of sheep kept in Slovakia.

The material involved 96 sheep of breeds tsigai, improved valachian, east friesian, lacaune and crossbreeds lacaune and tsigai . Genomic DNA was isolated by salting out method and used in order to estimate calpastatin and callipyge genotypes by means of PCR-RFLP method. The PCR products were digested with MspI restriction enzyme for calpastatin gene and FagI restriction enzyme for callipyge gene. In the total population of sheep was detected homozygous genotype MM – 0.87, heterozygous genotype MN – 0.13 for calpastatin gene. Homozygous genotype NN has not been observed. For the callipyge gene was detected homozygous genotype AA – 1.00 only. The heterozygous genotype AG and homozygous genotype GG was not detected.

Keywords: sheep, PCR-RFLP, calpastatin gene, callipyge gene

MORPHOLOGICAL AND PRODUCTIVE CHARACTERISTICS OF TWO TSIGAI ECOTYPES, USED AS GENETIC STOCK

CARACTERISTICI MORFO-PRODUCTIVE A DOUĂ ECOTIPURI DIN RASA TIGAIE, CONSTITUTE CA STOC GENETIC

MICLEA, V.¹, M. ZĂHAN¹, V. RĂU², AL. NAGY³, S. DĂRĂBAN,¹
ILEANA MICLEA¹

¹ University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, ² SCDCOC Reghin, ³ SCDA Turda; vasilemiclea21@yahoo.com

This paper investigates the morphological and productive characteristics of two Tsigai ecotypes belonging to the red variety. They represent genetic stock and semen, oocytes and embryos will be harvested from them in order to be cryopreserved. The sheep belong to the hill ecotype (Jucu farm and SCDCOC Turda) and the mountain ecotype (SCDCOC Reghin). Body dimensions and weight are characteristic for the breed and prove the superiority of the hill ecotype over the mountain ecotype. The differences between populations from the hill ecotype are an effect of the keeping and feeding, the measurements being higher for animals from the Jucu farm. Wool production of sheep from the mountain ecotype is close to that of animals from the Jucu farm. Characteristics list the sheep as part of the breeds having semi-fine wool. Milk production increases until the third lactation and then decreases. It is higher for the hill ecotype. Milk quality, expressed through fat and protein percentages is similar for the two ecotypes and characteristic for the breed.

Keywords: morphological and productive characteristics, Tsigai, genetic stock

DYNAMICS OF A FEW IMMUNE UNSPECIFIC PARAMETERS IN SHEEP FOOT DISEASES

DINAMICA UNOR PARAMETRI IMUNI NESPECIFICI ÎN AFECȚIUNILE PODALE ALE OVINELOR

DANIELA MOȚ

Faculty of Animal Science and Biotechnologies, Timișoara, România

In the spring period of year 2008 were been examined 63 sheep from a private herd in west side of our country in the view of foot diseases discovering. From these were selected 16 sheep from Țurcana breed, 1-6 years aged and divided in two groups: 8 healthy sheep and 8 with foot diseases manifested by lameness and walking refuse. From both groups were been taken blood samples in the view of unspecific immunologic parameters evaluation (seric properdine, lysozyme, phagocytic index). The obtain results in the healthy group were between normal limits (17.80 ± 1.28 properdine, 6.65 ± 0.35 lysozyme and 45.0 ± 1.53 phagocytic index) in comparison with diseased group, where obtained values were higher, almost doubled (41.06 ± 1.82 properdine, 11.27 ± 1.20 lysozyme and 81.92 ± 0.72 phagocytic index). These results emphasized that bacterial infections from the animals feet level induced an intense activation process of immune unspecific mechanisms.

Keywords: seric properdine, lysozyme, phagocytic index, immune unspecific parameters.

TEMPERAMENT OF DIFFERENT GOAT BREEDS

TEMPERAMENTUL DIFERITELOR RASE DE CAPRE

SZABINA NÉMETH, SZ. KONRÁD, MARTINA ORBÁN, L. GULYÁS

*University Of West Hungar, Faculty Of Agricultural And Food Sciences
H-9200 Mosonmagyaróvár, Vár 4. Hungary
szabina1007@freemail.hu*

The authors completed temper research among Alpine ($n=62$), Sanental ($n=54$) and Selected Hungarian breeds originated from a Győr-Moson-Sopron County's goat stock-farm. The most important aim of the sample survey was the determination of the relation between the temper and age of the three examined goat breeds. The temper estimation was fulfilled by scales-test assistance (the estimation of the animal's behavior in a 1-5 point range standing on a scales during 30 seconds). The average age of the examined goats ($n=181$) was $3,17 \pm 1,79$ years (Sanental: $3,74 \pm 1,94$; Alpine: $2,66 \pm 1,61$; Selected Hungarian : $3,21 \pm 1,69$ year). The average temper of the examined species was $2,77 \pm 0,97$. The smallest difference compared to the average was found in case of the Alpine breed ($2,72 \pm 0,86$), while the received temper result was $2,28 \pm 0,90$ by the Sanental and $3,24 \pm 0,94$ by the Selected Hungarian breeds. Statistically proved negative relation was found during the age and temper classes compared research ($P < 0,01$; $r = -0,379$), which means, that as the age goes further so decreases the animal's temper.

Keywords: Sanental, Alpine, Selected Hungarian, temper research, age.

EVOLUTION OF THE GROWTH SPEED UP TO THE AGE OF 8 MONTHS OF THE TURCANĂ X LACAUNE HYBRID YOUNG EWES COMPARED TO TURCANĂ ONES

EVOLUȚIA VITEZEI DE CREȘTERE PÂNĂ LA VÂRSTA DE 8 LUNI A MIELUȚELOR HIBRIDE TURCANĂ X LACAUNE COMPARATIV CU TURCANĂ

I. PADEANU¹, S. VOIA¹, I. SAUER², MARIA SAUER², D. RATIU²,
C. PASCAL³, GH. HRINCĂ⁴

¹ Faculty of Animal Sciences and Biotechnologies, Timișoara, România ioan_padeanu@yahoo.com

² S.C.D.C.O.C. Caransebeș, România

³ Faculty of Animal Sciences and Biotechnologies, Cluj, România

⁴ S.C.D.O. Popăuți, Botoșani, România

This paper aimed the monitoring of the average daily gain, from birth until the age of 8 months, of White Turcana x Lacaune hybrid lambs in comparison with White Turcana lambs. The investigations were performed in S.C.D.C.O.C. Caransebes. This study emphasized that in the first day of life, at weaning and at the age of 2 months the White Turcana x Lacaune hybrid lambs have not a significant ($p>0.05$) higher average daily gain in comparison with Turcana lambs. At the age from 2 to 8 months the hybrid lambs reached (113 g/day) a significant average daily gain ($p<0.05$) higher with 18.9 % comparison with Turcana lamb (95 g/day). It is a suggestion that, Turcana x Lacaune hybrid lambs have a superior growing speed, after pasture carrying and reach at the age of 8 months a body weight of 37-41 kg, being able for reproduction.

Keywords: Lacaune, Turcana, hybrids, average daily gain

EVALUATION OF REPRODUCTIVE EFFICIENCY IN TRANSILVANIAN MERINOS SHEEP BASED ON REPRODUCTIVE INDEXES

EVALUAREA EFICIENȚEI ACTIVITĂȚII DE REPRODUCERE A OILOR MERINOS DE TRANSILVANIA PE BAZA INDICILOR DE REPRODUCERE

I. PADEANU¹, C. MIRCU², S. VOIA¹, I. SAUER³, D. GAVOJDEAN¹, I. FRĂȚILĂ¹, ARIANA VELCIOV¹,

¹ Faculty of Animal Sciences and Biotechnologies Timișoara, România ioan_padeanu@yahoo.com

² Faculty of Veterinary Medicine, Timișoara, România

³ S.C.D.C.O.C. Caransebeș, România

The study was carried on 1425 ewes Transilvanian Merinos sheep in the farm belonging to SC Sinnagro SA, Timis country, regarding the reproduction during breeding season and in extra- season. The investigation revealed that these sheep held in good condition do express estrus (88%) during spring-summer (May-June) and are lambing during autumn (82%) with a lower prolificacy (109%). During fall, almost all sheep (98%) displayed estrus, lambing in a proportion of 94,8%, with a prolificacy of 127,1%. The statistical analysis emphasized that all reproductive indexes are higher ($p<0.01$) subsequent to breeding during normal season, compared to the extra-season, excepting fertility. These findings suggest that Transilvanian Merinos sheep are suitable for generating autumn lambs, for which does exists a great demand abroad.

Keywords: reproduction, reproductive indexes, sheep, Transilvanian Merinos.

MILKING PARLORS' THROUGHPUT FOR DAIRY SHEEP AND FACTORS THAT INFLUENCE IT

CAPACITATEA DE PRODUCȚIE A INSTALAȚIILOR DE MULS PENTRU OILE ÎN LACTAȚIE ȘI FACTORI CARE O INFLUENȚEAZĂ

B. SKAPETAS¹, V. LAGA¹, I. KATANOS¹, V. BAMPIDIS¹, ELEONORA NISTOR², D. NITAS¹, S. AGGELOPOULOS¹, GH. NISTOR²

¹Alexander Technological Educational Institute of Thessaloniki, 57400 Thessaloniki, Greece

²Faculty of Animal Sciences and Biotechnologies, Timișoara, Romania
bskapetas@yahoo.gr

The aim of this study was to investigate the parlors' throughput for dairy ewes and influencing factors in some European countries and in Greece. A great progress was done in this direction with the simultaneous improvement of the animals' milkability, the technological characteristics of milking machines and the technical knowledge provided to the farmers. Nowadays the average parlors' throughput for the "Casse" system milking machines is 160-200 ewes/milker/h, while for the "Carrousel" type milking machines it is 200-280 ewes/milker/h. In the case of installation of the automatic cup removal system the parlors' throughput ranges between 300-400 ewes/milker/h. In Greece, the average throughput for the "Casse" system parlors was found to range from 59 to 127 ewes/milker/h, while for the "Carrousel" type milking machines was found around 90-100 ewes/milker/h.

Keywords: dairy sheep; parlors, throughput

EFFECTS OF BARLEY PROCESSING ON THE BIO-PRODUCTIVE INDICES IN FATTENING THE WEANED LAMBS (NOTE II SMALL PARTICLES)

EFFECTUL PROCESĂRII ORZULUI ASUPRA INDICILOR BIOPRODUCTIVI LA TINERETUL OVIN SUPUS ÎNGRĂȘĂRII (NOTA II PARTICULE MICI)

S. VOIA¹, GH. BOGDAN¹, D. DRINCEANU¹, I. PADEANU¹, S. DĂRĂBAN²,
I. SAUER³, MIHAELA IVAN¹

¹ Faculty of Animal Sciences and Biotechnologies, Timișoara, România

² Faculty of Animal Sciences and Biotechnologies, Cluj, România

³ S.C.D.C.O.C. Carașebes, România
sorin_voia@yahoo.com

*The objective of our researches was to observe the nutritive and productive effect of the ratio, offered at discretion, composed of alfalfa hay and barley under the following presentation forms: whole grains, small particles ground (2.5mm) with and without addition of yeast, strain Yea-Sacc¹⁰²⁶, to lambs submitted for fattening. The experiment lasted 37 days, the biological material was represented by Turcana lambs, grouped in three lots (n=11). Growth performances were insignificant ($p > 0.05$) for the final body weight, total weight gain and average daily gain, but the specific intake was decreased with 0.85 UNC in lambs that consumed ground barley prior to those that consumed whole barley grains. The addition of *Saccharomyces cerevisiae*, strain Yea-Sacc¹⁰²⁶ in the ground barley at 2.5 mm has a significant effect ($p < 0.006$) regarding total weight gain and average daily gain compared to the lambs fed with whole barley grains, with a specific intake lower with 1.21 UNC.*

Keywords: lamb, fattening, nutrition, barley, yeast.

FARM ANIMAL WELFARE LEGAL REQUIREMENTS AND TRADITIONAL PRACTICES: A CASE STUDY OF WELANIMAL PARTNER COUNTRIES

CERINȚELE LEGALE ȘI PRACTICILE TRADIȚIONALE ÎN DOMENIUL BUNĂSTĂRII ANIMALELOR DE FERMĂ: STUDIUL DE CAZ AL ȚĂRILOR PARTENERE WELANIMAL

ZEHRA BOZKURT¹, EVANGELIA N. SOSSIDOU², L.T. CZISZTER³, MARYA PENEVA⁴, SZ. KONRÁD⁵, J. VENGLOVSKY⁶, E. SZÜCS⁷

¹Afyon Kocatepe Üniversitesi, Faculty of Veterinary Medicine, Department of Animal Science; ²National Agricultural Research Foundation, Veterinary Research Institute, Ionia, Thessaloniki, Greece; ³Banat University of Agricultural Sciences and Veterinary Medicine, Timișoara, Romania; ⁴University of National and World Economy, Sofia, Bulgaria; ⁵Szent István University Faculty for Agricultural and Environmental Sciences, Gödöllő, Hungary; ⁶University of Veterinary Medicine, Košice, Slovakia; ⁷University of West-Hungary, Faculty of Agricultural and Food Sciences, Mosonmagyaróvár, Hungary

According to the Amsterdam Treaty, animals are sentient creatures and animal welfare requirements should be precisely met while preparing and implementing the Commission laws. Accomplishing this, cultural, religious and regional characteristics should be considered. However, more and more regulations and laws are continuously introduced in Europe and worldwide. Ongoing WELANIMAL Project was financed by EU Commission adapting of vocational training products and results of training tools of WELFOOD related to the animal welfare-environment-food quality interactions is being enriched with consideration of cultural, socio-economic and religious approaches in order to determine a common work definition for all sectorial workers having different moral and social values on the subject of animal welfare and food safety Central and South-eastern Europe region. Although there is slight differences, national legislation in partner countries of EU in Project were harmonious with legal framework in EU regarding for all farm species. It is expected that three draft regulations in compliance with legal requirements animal protection in farms and during transportation and slaughtering and killing in Turkey, as a candidate country to membership into EU, in 2009. Also, due to in participating countries to the Project have ethnicity, history, tradition and religious structure show a great diversity it has been guessed that welfare concept which is a moral issue can be effected by people's cultural, religious and social composition. In the WELANIMAL Project, the effects of socio-cultural, religious and regional historical differences of workers and consumers within animal production chain on understanding of animal welfare concepts are being analysed. Furthermore in the light of obtained data a common vocational animal welfare definition and animal welfare, food quality and environment interaction will be evaluated. Through the Project web page (www.welanimal.aku.edu.tr) interactive training and certification will be accomplished. This paper intends to provide an overview of legal framework including Council Directives and National legislation laying down minimum welfare standards and traditional practices in Central and Sought eastern Europe in which WELANIMAL Project is ongoing.

Keywords: animal welfare, Central and South-Eastern Europe, legislation, WELANIMAL project

THE ROLES OF INDUSTRY AND SCIENCE, INCLUDING GENETIC SELECTION, IN IMPROVING ANIMAL WELFARE

ROLURILE INDUSTRIEI ȘI A ȘTIINȚEI, INCLUZÂND SELECȚIA GENETICĂ, ÎN ÎMBUNĂTĂȚIREA BUNĂSTĂRII ANIMALE

D.M. BROOM

Centre for Animal Welfare and Anthrozoology, Department of Veterinary Medicine, University of Cambridge, Madingley Road, Cambridge CB3 0ES, U.K.

Animal producers have to predict future situations and be aware of changing public views. At present, those in the animal industry are often trying to fight off change rather than preparing for and pre-empting it. As a consequence, many animal producers have bad public images. It is better to be proactive than reactive. Producer groups should be aware of new developments in knowledge and in public attitudes to animal-related activities. They should inform their members about how to manage animals in such a way that the welfare of the animals is good and the people involved in animal care are well-respected in society. This is especially important also for those who design and manufacture housing and equipment and those who breed animals for they can have substantial effects on animal welfare. It is important for animal welfare scientists to provide objective information about the welfare of animals, so that decisions can be taken about how animals should be bred, housed and treated. Animals use a wide range of coping mechanisms and these involve high-level brain function, with associated good and bad feelings. Where welfare is poor, the best overall assessment of welfare is a function of how bad is the effect on the individual and the duration of that effect. Conventional breeding, cloning and transgenesis can all have effects on the welfare of the animals produced. Selection for fast growth and high feed conversion efficiency in broiler chickens and other meat producing animals leads to too high an incidence of leg and other disorders. Selection for high milk yield in dairy cows leads to poor welfare associated with leg disorders, mastitis and reproductive disorders. These effects should be evaluated using a range of animal welfare measures and if there are adverse effects of genetic engineering, the usage of the animals should not be permitted except for research. In the case of genetically modified or cloned animals, any effects on function or welfare should be fully specified in documentation that should accompany the animal.

Keywords: animal producers, animal breeders, genetic selection, animal welfare

METHODS FOR CALF WELFARE EVALUATION

METODE DE EVALUARE A BUNĂSTĂRII LA VIȚEI

L.T.CZISZTER¹, G. STANCIU¹, S. ACATINCĂI¹, E. SZUCS², SILVIA ERINA¹,
I. TRIPON¹, SIMONA BAUL¹

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, România, cziszterl@yahoo.com, ²Szent István University, Gödöllő, Hungary

This paper reviews the welfare assessment with reference to calves. Assessment methods were divided into individual level and farm (system) level. At the farm level the ANI 35L is discussed and the ANSVSA, Romanian evaluation from is presented. Also, the EFSA opinion on poor welfare in intensive calf farming systems is presented.

Keywords: calf, welfare, assessment

FARM ANIMAL WELFARE ECONOMICS

ECONOMICITATEA BUNĂSTĂRII ANIMALELOR DE FERMĂ

L.T. CZISZTER¹, S. ACATINCĂI¹, G. STANCIU¹, E.N. SOSSIDOU²,
M. PENEVA³, D. GAVOJDIAN¹

¹Faculty of Animal Sciences and Biotechnologies, Timișoara, România, cziszterl@yahoo.com, ²National Agricultural Research Foundation, Veterinary Research Institute, Thessaloniki, Greece, ³University of National and World Economy, Sofia, Bulgaria

This paper reviews the literature regarding the economics of the farm animal welfare. The following issues are addressed: productions costs and savings of the animal welfare regulations, benefits of improved animal welfare, and consumers' willingness to pay for animal-friendly products.

Keywords: farm animal welfare, economics, costs, benefits, willingness to pay.

RESEARCHES REGARDING RESTING BEHAVIOUR IN LACTATING DAIRY COWS DURING FIRST HUNDRED DAYS AFTER CALVING

CERCETĂRI PRIVIND COMPORTAMENTUL DE ODIHNĂ LA VACILE DE LAPTE AFLATE ÎN PRIMELE 100 DE ZILE DE LA FĂTARE

D. GAVOJDIAN, L.T. CZISZTER, S. ACATINCĂI, I. TRIPON, SIMONA BAUL, ALINA
CIOBANU, C. POPIAN, A. BOGNAR

*Faculty of Animal Sciences and Biotechnologies, Timișoara, România
gavojdian_dinu@yahoo.com*

Choices in stabling and management affect the behavior, health, longevity and performance of cows. Resting behavior provides additional information about comfort and health. In the current study were used twenty Romanian Black and White multiparous cows, housed in a tie stall barn 24 hours per day. Experiments were carried out during winter and summer seasons, in February and June 2008. Cows monitored were in their first hundred days of lactation. In our study cows spent resting during winter season on average 379.9 minutes (6.33 hours), value that represents 26.38 % from the day's interval. During cold season, cows spent resting while standing on average 277.40 minutes, and while lying recumbent, only 97.55 minutes. Time devoted to rest during summer season per 24 hours was on average 613.75 minutes (10.22 hours), value that represents 42.60% from the day's interval. During summer, position adopted by cows for resting periods was as follows: 453.65 minutes in standing position and 160 minutes while lying recumbent. Differences registered between the two seasons for time spent resting and position adopted during resting periods, were very significantly statistically ($p < 0.001$).

Keywords: resting behavior; dairy cows; Romanian Black and White

CRITICAL POINTS IN THE FEEDING OF HIGH YIELDING DAIRY COWS IN ASSOCIATION WITH BCS AND METABOLIC PROFILE TEST PUNCTE CRITICE ÎN HRĂNIREA VACILOR DE LAPTE ÎN ASOCIERE CU CONDIȚIA CORPORALĂ (BCS) ȘI TESTUL PROFILULUI METABOLIC

GERGÁCZ, Z., SZÜCS, E.

*University of West Hungary, Faculty of Agricultural and Food Sciences
Mosonmagyaróvár, Hungary*

The aim of the study was to analyse the relationship between the body condition and the results of metabolic profile tests done in the milk (DIM) of dairy cows in different days. Moreover, critical points in the early pre- and postpartum period were also analysed. In the experiment, blood and urine samples were taken from 1984 clinically healthy cows (from 49 large scale dairy farms in Hungary), selected randomly from various groups of cows with different physiological stage of lactation and gestation, 3-5 hours after the morning feeding. During the experiment body condition scoring (BCS) was measured on 1-5 scale, as well. It was concluded, that the BCS (body condition score) decreased from the 1st day of lactation (3.48) onwards till the 44th day (2.65) and slightly increased till the day 218 (2.89). The haemoglobin value and the glucose concentration in blood samples were ranging within the physiological range and followed the tendency of BCS and the relationship between them and DIM was ($P < 0.001$). There was a close negative correlation between the NEFA (non-esterified-fatty-acid) concentration in blood samples and BCS change and it was found that these values were significantly different ($P < 0.01$) compared to the DIM. The aceto-acetic acid concentration exceeded the upper limit of the physiological range indicating hyperketonaemia at DIM 18. The AST (aspartate amino-transferase, liver-enzyme) activity value exceeded the upper limit of physiological range and followed the tendency of BCS change. The urea concentration in the blood exceeded the upper limit of the physiological range in all cows. The NABE (net acid-base empty) value in the urine samples indicated acid load in the first two groups) of samples (pre-, and post calving. During factor analysis I could differentiate three group factors and one individual. The most important factor is the acid-based factor (with urine pH and NEBA). The results of the present study also confirm that the body condition scoring is a reliable tool for revealing the risk of metabolic disorders caused by malnutrition.

Key words: cows, body condition score, days in milk, haemoglobin, glucose, NEFA, aceto-acetic acid, AST, blood and urine urea, NABE, urine pH

EFFECT OF GENOTYPE, SEX AND KEEPING TECHNOLOGY ON THE CHEMICAL COMPOUNDS OF BREAST AND THIGH MEAT EFFECTUL GENOTIPULUI, A SEXULUI ȘI A TEHNOLOGIEI DE CREȘTERE ASUPRA COMPOZIȚIEI CHIMICE A CĂRNII PIEPTULUI ȘI PULPELOR

SZ. KONRÁD, KATALIN KOVÁCSNÉ GAÁL

*University of West Hungary, Faculty of Agricultural and Food Sciences
H-9200 Mosonmagyaróvár, Vár 2.*

konradsz@mtk.nyime.hu

In the recent decades because of the alternative poultry meat production technologies (free range and organic farming), which are gaining ground in some of the European countries, only special slow growing breeds and hybrids can be used. The end products created by crossing the indigenous Yellow Hungarian hen with different meat type cocks were suitable for alternative keeping technology. The valuable meat parts of the pure bred Yellow Hungarian kept in free range for 84 days and the end product created with crossing (first group) as well as the valuable meat parts of Ross 308 broilers fattened for 42 days in intensive keeping technology (second group) were thoroughly examined in order to establish whether the genotype, sex and/or keeping technology has any kind of influence on different chemical parameters of the meat. There were no essential differences between the dry matter content of breast meat of the two different keeping technology groups (25.34 and 26.25%). However, dry matter content of thigh was 5.28 to 7.48 percentage points higher in the second group. Protein contents of breast and thigh meat were not affected by the keeping technology. Fat content of thigh meat was two and a half times higher than in the first group (6.03 and 13.73%). Thus, this study have revealed that only the ash content of breast meat affected from the keeping technology, as this parameter was higher in the first group than the second group (0.84 to 1.05 % vs 0.53 %).

Key words: Yellow Hungarian, free-range, breast, thigh, chemical compounds

ANIMAL WELFARE AND ECONOMIC EFFECTIVENESS IN BULGARIA AND EU FARMS

BUNĂSTAREA ANIMALĂ ȘI EFICIENȚA ECONOMICĂ ÎN FERMELE DIN BULGARIA ȘI UE

TSVETANA HARIZANOVA¹, MARYA PENEVA²

¹ Institute of Animal Science, Kostinbrod, Bulgaria, ts_harizanova@abv.bg

² University of National and World Economy, Sofia, Bulgaria, peneva_mm@yahoo.co.uk

In this study the relationship between economic effectiveness and animal welfare standards is investigated in the case of the pig and cattle breeding. The issue is of importance in order to assess economic viability of livestock breeding while applying animal friendly practices. This paper considers animal welfare standards in national regulations in pig breeding and cattle breeding, production under animal welfare and economic effectiveness in the specified sectors. It is pointed out the conditions which the legislation lays down to ensure better animal welfare. The discussion continues with detailed examination of the applying these standards in the production process. At the end of the paper are presented main conclusions concerning economic efficiency under animal welfare standards. The aim of the paper is to analyse the interactions between the economic effectiveness of livestock production and animal welfare in the pig breeding and cattle breeding.

Keywords: Animal welfare; Economic effectiveness; Pig breeding; Cattle breeding

USAGE OF PLASTIC LITTER MADE FROM SEPARATED SLURRY IN FARM ANIMAL BREEDINGS ESPECIALLY IN CATTLE

FOLOSIREA DEȘEURILOR DIN MATERIAL PLASTIC REZULTATE DIN SEPARAREA PURINULUI PROVENIT DIN FERMELE DE CREȘTERE A TAURINELOR

M. ŠOCH, JANA ŠŤASTNÁ, V. PÁLKA, B. VOSTOUPAL¹, P. NOVÁK², J. BROUČEK³, B.
ČERMÁK

*University of South Bohemia, Faculty of Agriculture, Department of Anatomy and Physiology of Farm Animals,
České Budějovice, Czech Republic*

soch@zf.jcu.cz

¹Agricultural Coop. Krasna Hora, Share Company,
Krasna Hora nad Vltavou

²University of Veterinary and Pharmaceutical Sciences,
Faculty of Veterinary Hygiene and Ecology

³Research Institute of Animal Production, VUZV, SCPV Nitra

The observation was performed in two dairy cows' herds of Holstein breeding stabled in brick buildings with loose box stabling system. The separated slurry was used as litter in one of the building, classical stabling regime with straw litter was used in the other one. The experiment ascertained a significant tendency to reduction of microorganisms and parasites quantity in separated slurry modified by biometric treatment through the method of managed composting process. There was quite a small quantity of microorganisms and parasites in samples taken from litter of separated slurry and only after three weeks a gradual proliferation of them began. From the viewpoint of the dairy cows' state of health, the quantity and quality of their milk production, the cleanness of their body surface, the periods of their lying and other ascertained welfare parameters under given microclimatic conditions the application of separated slurry as plastic litter fully complied.

Keywords: separated slurry, plastic litter, dairy cows, health, ethology

ASSURING QUALITY IN FARM ANIMAL WELFARE CURRICULA: THE CASE OF WELFOOD CURRICULA

ASIGURAREA CALITĂȚII CURRICULEI BUNĂSTĂRII ANIMALELOR DE FERMĂ: CAZUL CURRICULEI WELFOOD

EVANGELIA N. SOSSIDOU¹, D. STAMATIS², E. SZÜCS, R. GEERS⁴

¹National Agricultural Research Foundation, Veterinary Research Institute, 57001 Themi, Thessaloniki, Greece, P.O. Box 60272, Greece, Tel.: ++302310 365383, Fax: ++302310 365371, E-mail: sossidou.arig@nagref.gr; ²Aristotle Technological Educational Institute of Thessaloniki, Department of Informatics; ³AgroEurope, Gödöllő, Hungary; ⁴Zootechnical Centre – K.U.Leuven R&D, Bijzondere Weg 12, B-3360 Lovenjoel, Belgium

The aim of the present study is to analyze virtual learning environments and to provide a framework for assuring quality in farm animal welfare curricula. The framework is constructed according to the experimental learning for a case study developed in the context of the Leonardo da Vinci Community Vocational Training Action Pilot Project entitled “WELFOOD-Promoting quality assurance in animal welfare-environment-food quality interaction studies through upgraded e-Learning”. WELFOOD addressed objectives such as improvement and competencies of the skills in vocational training to promote employability and facilitate integration and reintegration in terms of capabilities and knowledge, needed for improved technologies in animal husbandry and food industry.

Keywords: farm animal welfare, food quality, environment, curricula, quality

WELFARE ASPECTS OF THE LONG DISTANCE TRANSPORTATION OF CATTLE

ASPECTE ALE BUNĂSTĂRII ÎN TRANSPORTUL TAURINELOR LA DISTANȚE MARI

EVANGELIA N. SOSSIDOU¹, D. M. BROOM², L. T. CZISZTER³, R. GEERS⁴,
G. GEBRESENBET⁵, E. SZÜCS⁶

¹National Agricultural Research Foundation, Veterinary Research Institute, 57001 Themi, Thessaloniki, Greece, P.O. Box 60272, Greece, Tel.: ++302310 365383, Fax: ++302310 365371, E-mail: sossidou.arig@nagref.gr; ²Centre of Animal Welfare and Anthrozoology, Department of Veterinary Medicine, University of Cambridge; ³Faculty of Animal Science & Biotechnologies, USAMVB Timisoara, Romania; ⁴Zootechnical Centre, K.U.Leuven R&D, Belgium; ⁵Logistics and Transport Division, Department of Energy and Technology, Swedish University of Agricultural Sciences, Uppsala, Sweden; ⁶AgroEurope, Gödöllő, Hungary

This paper sets out to examine the facts behind the trade of long distance transportation of cattle. In particular it looks at the various welfare implications during handling and transport with examples from research work on cattle. The role of the science is explained and the methodology for assessing the welfare of animals is then presented. Finally, public concerns and legal position are presented as they play an important role to promote farm animal welfare principles during transportation.

Keywords: cattle, transport, welfare

STILLBIRTH IN DAIRY CATTLE: REVIEW

AVORTUL LA BOVINE: O TRECERE ÎN REVISTĂ

E. SZÜCS¹, L. GULYÁS², L. T. CZISZTER³, I. DEMIRKAN⁴

¹Szent István University, Gödöllő, Hungary, ²University of West Hungary, Mosonmagyaróvár, Hungary, ³Faculty of Animal Sciences and Biotechnologies, Timișoara, Romania, ⁴Kocatepe University Afyonkarahisar, Turkey

Findings of research and experiences gained in commercial practice reveal needs for efforts in order to reinforce further development in the subject matter of calving difficulty and stillbirth in dairy cattle with special emphasis on causes and effects. Direct costs such as loss of calf, death of dam, labour, veterinary assistance and other ones influencing economics in longer term e.g. higher culling rate, reduced milk yield and fertility have to be evaluated and interpreted. The effects of non-genetic factors, parity, sex of calf, age at first calving, season, level of nutrition during gestation and their supposed modes of action has to be considered. In the genetic model for calving traits estimates the following components has to be included such as direct, maternal, and direct-maternal interaction. Thus, accurate and complete reporting of calving ease and stillbirth data is critical for several reasons: increase the accuracy of sire calving ease and daughter calving ease evaluations; allow the development of national stillbirth evaluations; the farmer can enhance future sire selection opportunities for the herd. The aim is to reduce economic losses, improve welfare status of animals, meeting increased concern of consumer acceptance of milk and dairy products.

Key words: dairy cattle, stillbirth, genetic and non genetic factors, economic loss animal welfare, consumer acceptance, corrective actions