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STUDY ON EMBRYO DEVELOPMENT IN ZEBRA FISH (*Danio rerio*) DEPENDING ON DIFFERENT pH LEVELS

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The aim of this paper is to emphasize the main aspects of the ways in which different pH levels influence the development of zebra fish (Danio rerio) embryos.
During the experiments there have been used 6 variants with different pH levels in order to monitor the development of zebra fish embryos in 40 ml Nunk culture dishes at optimum density (1 embryo/ 3 ml) and at an optimal temperature of 28.5^{o}C.
It could be noticed that most embryos died in a pH=6 medium (70%). This means that such a medium is not suitable to embryo's development. For the control variant (pH=7) it has been recorded the lowest mortality rate of only 23% and in the case of other variants the mortality was of 30-40%.
The studies of the pH influence upon the zebra fish embryo development have underlined the fact that little digressions from the optimal conditions can led to irreversible modifications within the roe which sometimes are even lethal.
Key words: zebra fish, embryo development, pH.

STUDY REGARDING THE LIGHT INFLUENCES ON EMBRYO DEVELOPMENT IN ZEBRA FISH (*Danio rerio*)

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The aim of this paper is to emphasize the main aspects of the ways in which light influences the development of zebra fish (Danio rerio) embryos.
During the experiments 3 variants with natural light, continuous light and totally dark were used to monitor the development of zebra fish embryos in 40 ml Nunk culture dishes at optimum density (1 embryo/ 3 ml) and at 28,5^{o}C temperature.
It could be noticed that most embryos died in continuous light medium (57%). This means that such mediums are not suitable to embryos' development. For the control variant (natural light) it was recorded the lowest mortality rate of only 17% and in totally dark variant the mortality was of 40%.
Researches on the influence of light on zebra fish embryo development showed that the most suited medium for supporting, growing and developing the Danio rerio embryos it the medium having natural light.

Key words: zebra fish, embryo development, light.

BIOMETRIC STUDY TO *RANA RIDIBUNDA* FROG SPECIES NEARNESS TO TIMISOARA LOCALITY

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Speciality literature provides little informations regarding Rana ridibunda frog biometry. For supply this gap we studied the size and weight of 54 frogs sampled from nearby Timişoara area ponds.
The mean body lenght was 8,08 ± 0,54 cm for the females and respectively 6,17 ± 0,45 cm for the males. Before evisceration on a par females weighted 62,28 ± 12,87 g and the males 22,46 ± 5,3 g whereas after this action the carcase weighted 43,89 ± 8,91 g in the case of females and respectively 18,45 ± 4,42 g in the case of male lake frog. The mean leg lenght measured 12,59 ± 0,68 cm for female frogs and 9,78 ± 0,66 cm in the case of male frogs. The hind stylopodium was estimated on a par as 13,23 ± 2,57 g for females and 5,33 ± 1,26 g for the males.
Keywords: biometric measurements, Lake Frog, *Rana ridibunda*

ATTEMPTS OF INDUCTION OF SEX-REVERSAL IN CARP (*CYPRINUS CARPIO* VAR. KOI) USING TESTOSTERONE UNDECANOAT

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The aim of this paper is to find if testosterone undecanoat (TU) could be used in sex-reversal protocols to obtain inverted males (XX) and which are the consequences using this hormone for koi carp. To induce sex-reversal, we chose to feed a normal mixed-sex progeny of koi carp with food mixed with 30 (V_1), 60 (V_2) and 90 (V_3) mg TU / kg food, starting at the age of 30 days for a period of 60 days. When fishes had 3 months old, they were moved into a bigger aquarium and they were fed without hormones until the age of 6 months when some of fishes were sacrifices to take samples for histological studies. At this age the main morphometric traits were registered. Our results indicated that the mortality percent raise dependent by the quantity of TU from food, with a maximum value in variant V_3 (90 mg TU / kg food) where it reached 64% in koi carps until the age of 3 months. Total length was the single trait that registered significant differences ($p<0.01$ and $p<0.05$) when comparisons among control and all the other experimental variants were made. This suggests that TU treatment significantly reduced length growing of the carps even it was administered in dose of 30, 60 or 90 mg / kg food. Supplementation of food with TU modified sex ratio in studied fishes.

Key words: carp, sex-reversal, testosterone undecanoat.

SEXUAL MORPHOLOGICAL TRAITS AND BODY INDICES DIMORPHISM IN A DANUBE 2 YEARS OLD PIKEPERCH POPULATION

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The aim of the study was to determine if there is sexual dimorphism in a 2 years old pikeperch population from the Danube. A total of 46 pikeperch (Sander lucioperca) individuals, males and females, caught in the Danube, were examined. Body weight, total length, standard length and girth as morphological traits and the Fulton index were calculated to compare males with females. The age of fish was determined based on the scales samples. Verge coefficient was taken into account when classifying individuals examined to age groups.
Although there were some differences between males and females, the differences were not significant.
Key words: pikeperch, Danube, sexual dimorphism, morphological traits, Fulton index

EFFECTS OF FORMULATED FEED ON WATER QUALITY IN FINGERLING WALEYE PRODUCTION PONDS

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Six 0.04-ha plastic-lined ponds were used at the Iowa Department of Natural Resources' Rathbun Fish Culture and Research Facility to evaluate the use of supplemental fish food on walleye (Sander vitreus) fingerling growth and survival, and on the benthic invertebrate community. Walleye were stocked 3-4 days post hatch on 2 May 2003, and harvested 5-6 June 2003. Organic fertilizer (alfalfa pellets, 112kg/ha/week) was used to increase primary production and inorganic fertilizers were added periodically to maintain a target nutrient ratio of 7:1 nitrate-nitrogen to total phosphorus (NO_3-N: TP). Additional nutrients in the form of Lansy CW fish feed were added to three of the six ponds. The objective of this project was to determine the effect of a commercial fish diet on water quality. At the end of the culture season, there were significant differences between water chemistry parameters in the ponds; the feed treatments had higher levels of nitrogenous compounds and total phosphorus.
Key words: walleye, feed, water quality.

OBTAINED RESULTS AFTER APPLYING THERMAL SHOCKS AND PITUITARY EXTRACT INJECTION IN ORDER TO ARTIFICIALLY BREED THE STERLET (*ACIPENSER RUTHENUS*)

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The sterlet (Acipenser ruthenus) is an important candidate for the Romanian aquaculture, due to the short period of time in which it reaches sexual maturity. The paper is describing in detail the steps that should be followed for artificially breed the sterlet. The study was made in early spring of 2006 at an important sturgeon hatchery. After parking the broodstock in rounded corners tanks and applying the thermal shocks, the following step was the injection of pituitary extract in order to accomplish the ovulation. Observations of female body weight variation until the moment of eggs striping where made, when the gonosomatic index was established. The study also contains observations of sterlet oocytes characteristics.
Key words: *Acipenser ruthenus*, broodstock, pituitary extract, thermal shock.

SLEEPING AND RESTING BEHAVIOR, FACTORS AND IMPLICATIONS IN BREEDING TECHNOLOGY OF CHINCHILLA

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Fallowing many papers, related to different breeding systems of the Chinchilla l., wire netting floor and bedding cage, which results that there are no significant differences overview the growth indices and implicit the forage intake, we where studied the breed's behavior to explain all these. Adopting one of the breeding systems involves smaller or bigger investment, this being the principal aim of this paper. Knowing that Chinchilla has an inactive period of 71,02% from 24 h, they are resting 54,05% and 16,97% so-called sleeping in 24 h. From our studies results that most of inactive time (rest and sleeping) they are sitting on the dust bath tray, no matter the floor type. That explains there are no significant differences in outputs depending on the adopted technology.
Key words: Chinchilla l., behavior, breeding system, floor.

ETHOLOGICAL STUDIES ON CALIFORNIAN RABBIT FEMALES

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The aim of this paper was to underline different ethological aspects on Californian rabbit females, aspects which have important technological involves and define specific approach of this breed, his temperament being net different from other breeds. Studies shows, that the Californian rabbit females demonstrate almost without exceptions that, they gets extremely lively and nervous temperament with its kind and humans alike. This behavior determinates difficult approaches in breeding and reproduction technologies, being difficult to determinate the early pregnancy with males, facts that constrain us to use non-conventional and risky practices in reproduction process. Concrete, was necessary to mating females 5 by 5 days, to eliminate lost time and have a continuous reproduction rhythm.
Key words: rabbit, Californian, behavior, female, reproduction.

RESEARCHES ON THE PHENOTYPIC CORRELATION BETWEEN DIFFERENT MEASUREMENTS ON THE CARCASS OF RABBITS

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The aim of this experiment was to get more experimental data on new methodologies for rabbit meat production evaluation. The trial was carried out on 30 rabbits. The rabbits were weaned at 35 days, having an average live weight of 499.11±25.98 g. Rabbits were all slaughtered on the same day, that was on the 84th day of living (at this time the average live weight was 1701.7±34.07), and some linear measurements (body length, loin width, chest width, carcass length chest dept and hind leg length) were performed on cold carcasses. The rabbits have been kept in wire fattening cages: 6 rabbits / cage.
Key words: rabbit, meat production, phenotipic correlation.

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IBRD CONCERNS REGARDING THE QUALITY HARMONIZATION OF ROMANIAN BEE PRODUCTS TO THE EUROPEAN LEGISLATION

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To ensure the competitivity of the bee products a thorough and accurate quality control of their quality at the level of an authorized laboratory is necessary. Such a laboratory can only function with a specialized staff, using modern and reproducible analytical methods, and ISO certified equipments.
This report presents the scientific and technical objectives of the specialized laboratories from IBRD meant to harmonize Romanian legislation and quality control of Romanian bee products to the European Union standards.
Key words: bee products, quality control, European Regulatory Commission for food and honey.

COMPARED STUDY ON HONEY PRODUCTION OBTAINED IN DIFFERENT OPERATIONAL SYSTEMS

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Pastoral beekeeping imply carefully selection of the hive type because of the high costs of this type of exploitation. The hives must be able to produce a high amount of honey to compensate with the production costs. In this paper we made a study for establishing the necessary hive type to be used in pastoral beekeeping. Three hive types were used (horizontal, multileveled and vertical) during the linden and sunflower harvests. The study showed the utility of using the last hive type for this kind of beekeeping.
***Key words**: Beekeeping, pastoral, hive type, honey production*

MELLIFEROUS CHARACTHERISTICS OF SPONTANEOUS LAMIACEAE SPECIES, IDENTIFIED IN THE DANUBE VALLEY

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Thus the spontaneous and melliferous species of the Lamiaceae family occurring in the Danube Valley are not very important in number; they represent one of the main honey sources for the Romanian apiculture. Therefore a study was carried out on the melliferous potential of the species belonging to the Lamiaceae family from the Danube Valley. The effective area of study was represented by the Danube Valley in Călăraşi County. Within this study, the species belonging to the Mint genre were identified and their melliferous potential was established.

A number of three species of mint (Mentha pulegium L., Mentha longifolia L., Mentha arvensis L.) was identified, to which biometric measures were performed (as the height of plant, number of flowering stems per plant, number of flowers per plant, number of plant per square meter) as well as melliferous determinations (as nectar secretion in mg per flower and the nectar concentration in sugar), and by using a mathematical formula there were established the melliferous potential for each identified mint species.

Key words: *mint species, biometric measurements, melliferous determinations.*

RESULTS CONCERNING THE MELLIFEROUS CHARACTERISTICS OF THE SUNFLOWER HYBRIDS CULTIVATED IN ROMANIA

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The present paper presents the melliferous characteristics of thirty three sunflower hybrids studied in the period 2002-2006 in South Romania. The studied hybrids were the following: Festiv, Florom 350, Alex, Romina, Performer, Turbo, Favorit, Justin, Splendor, Trajano, Hercule, Felix, Select) and 20 being foreign hybrids (Melody, Sunko, Sanay, Kasol, NK Dolbi, NK Ferti, NK Armoni, Opera PR, Rigasol, Huracan, Podium, Fleuret OR, Rigasol, OR, Mateol, Lindor, Fly, Arena, Alexandra, Masai, Saxo

In order to evaluate the quantity of sugar per hectare and further the potential yield of honey per hectare, the nectar secretion (capillaries method), the sugar concentration of the nectar (refractometer method), the number of flowers per head and the number of plants per hectare were determined during field studies.

Key words: sunflower hybrids, *melliferous characteristics*.

RESULTS ON THE FLOWERING STAGE IN THE ROMANIAN-GROWN SUNFLOWER HYBRIDS

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The present paper presents the results of the research carried out on forty sunflower hybrids in southern Romania (15 km far from northeastern Bucharest), under the 2004 and 2006 climatic conditions, regarding the flowering stage, the period and the duration of flowering process within the crop, respectively. The studied hybrids were the following: Favorit, Festiv, Florina, Jupiter, Alcazar, Top 75, Venus, Alex, Saturn, Minunea, HS 2442, HS 2606, Milenium, Romina, Performer, Select, Justin, Splendor, Hercule, Felix, and twenty foreign hybrids cultivated in Romania: Huracan, Kasol, Lindor, Masai, Mateol, Podium, Saxo, Sunko, Fly, Rigasol, Rigasol OR, Fleuret OR, Arena, Melody, NK Armoni, Alexandra, NK Dolbi, NK Ferti, Opera PR, Sanay.

At the studied sunflower hybrids were performed the following determinations:

- *sum of growing degree days (GDD) from plant emergency (i.e. when 75% of the plants emerged) to the beginning of the flowering process within the crop (i.e. when 10% of the sunflower heads are flowered);*
- *date for the first sunflower heads flowering;*
- *date for the beginning of the flowering process, i.e. when 10% of the sunflower heads have flowered in the whole crop;*
- *date for the plain flowering phase, i.e. when 50% of the total sunflower heads have flowered;*
- *date for the full-flower phase, i.e. when all the sunflower head in the crop have flowered;*
- *date for the time when only 10% of the sunflower heads were still in flower;*
- *date for the end of flowering, i.e. when no sunflower heads are in flower in the whole crop;*
- *number of days between different flowering stages.*

Key words: sunflower hybrids, flowering stage.

STUDY ON THE BEHAVIOUR OF THE DIFFERENT ORIGIN SILKWORM HYBRIDS UNDER THE CLIMATIC CONDITIONS OF BULGARIA

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A comparative study of the fifteen commercial F1 hybrids produced in Azerbaijan, Bulgaria, Romania, Ukraine, Turkey and Uzbekistan as countries placed in the Black, Caspian Seas and Central Asia (BACSA) region, in comparison with hybrids from China, Japan, Italy and Korea has been carried out in Sericulture Station Vratza – Bulgaria.

The study pointed out the superiority of the Japanese hybrid Shunrei + Shogetsu which had the highest cocoon yield by one box of eggs (41,10 kg) and the highest raw silk productivity (7,05 kg/box of eggs).The silkworm hybrids produced in BACSA members countries had a hatching percentage ranged from 77,50% to 98,50%, a high pupation percentage (72,86 – 96,91%), cocoon weight (1,892 – 2,319 g) and fresh cocoon yield by one box of silkworm varied from 29,894 kg to 40,982 kg.The Romanian hybrids had high values of the raw cocoon weight (2,307 g Record and 2,194 g Baneasa Super), the appreciable values of the cocoon yield/box of eggs (36,135 kg Record and 39,168 kg Baneasa Super), but low values of the silk content (20,38% Record and 20,51% Baneasa Super) and of the raw silk productivity/box of eggs (4,33 kg Record and 4,80 kg Baneasa Super).The breeding works in the BACSA member countries, should be directed towards improvement of the silk productivity of the hybrids and the qualities of the silk fibre, by the same time preserving their comparatively high pupation rate and cocoon yield.

Key words : silkworm, Bombyx mori L, hybrids, testing.

MELLIPHEROUS TREES MONITORING FROM FĂGET FORESTRY DEPARTMENTS

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Forestry mellipherous trees represent one of the most important nectar, pollen and manna source, for bee families developing. This paper presents the results of a study made by the purpose of seeing in what manner the mellipherous trees belonging to Faget Forestry Departments ensure maintenance and production harvesting for bee families from this area. The study was made during the period of May 2006 and April 2007, on a 19712 hectares area, in which we recorded: forestry mellipherous trees identification, the surface occupied by each specie and the blooming period, data that we used to calculate the amount of honey that can be obtained and the number of bee families that can be kept in the area, respectively. Analyzing the data, we concluded that forestry mellipherous trees from Faget Forestry Departments can ensure in normal conditions, maintenance and production harvesting for 3800 bee families.

Keywords: forests, mellipherous trees, monitoring, bee families

MELLIPHEROUS TREES MONITORING FROM ANA LUGOJANA FORESTRY DEPARTMENTS

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This paper presents the results of a study made by the purpose of seeing in what manner the mellipherous trees belonging to Ana Lugojana Departments ensure maintenance and production harvesting for bee families from this area. The study was made during the period of May 2006 and April 2007, on a 12301 hectares area, in which we recorded: forestry mellipherous trees identification, the surface occupied by each specie and the blooming period, data that we used to calculate the amount of honey that can be obtained and the number of bee families that can be kept in the area, respectively. Analyzing the data, we concluded that forestry mellipherous trees from Ana Lugojana Forestry Departments can ensure in normal conditions, maintenance and production harvesting for 3239 bee families.

Keywords: forests, mellipherous trees, monitoring, bee families

EFFECTS OF THERAPEUTIC NUTRITION WITH THE APITHERAPEUTIC PRODUCT *APITER* IN DOGS AND CATS IN RICKETS DISEASE

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In order to create the product APITER the researches were carried out in the Institute for Beekeeping Research and Development - Bucharest and the product was preclinical and clinical tested in the Medical Clinic of the Veterinary Medicine Faculty from Bucharest.The increasing interest in internationally context for non-conventionally therapies and especially for the apitherapy and phitotherapy used in veterinary purpose determined us to study the effects of such therapies in bone diseases (rickets) in dogs and cats using a new product -Apiter.The clinical experiments were done in the period - October 2004 – February 2006 using a lot of 70 individuals (dogs and cats), of different ages between 6 weeks and 7 years with osteo-articulars disorders of rickety type for young individuals and osteomalacia (adult rickets), in treatment series of 10 and 30 days.The clinical investigations were completed by radiological exams and biochemical determinations (Ca, Mg, P and alkaline phosphatase), the resulted values being registered before and after treatment.The obtained results shown us that the tested methods with the new product APITER, applied on dogs and cats with rickets disease were as efficiently as the classic nutrition methods.The therapeutic efficiency of the new product was proved by the increased values of Calcium - from 4 mg/dl to 9,2-11,5 mg/dl, Phosphor –from 1,6-3,81 mg/dl to 4,1-5,7 mg/dl, the normalization of the Mg values (2,5-3 mg/dl), the decreasing of alkaline phosphatase (116-443 UI/l la 77-187 U/l) concomitantly with the normalization of hepatic tests (ALT, GGT, AP, TBIL).

Key words : APITER apitherapeutic product, rickets, calcium, phosphorus, magnesium, Alkaline phosphatase, aspartataminotransferase, alaninaminotransferase, creatinine

THE REFERENCE VALUES OF THE MAIN BIOCHEMICAL PARAMETERS OF THE HEMOLYMPH OF *APIS MELLIFERA CARPATHICA* IN SOUTH-EASTERN ROMANIA

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Although biochemical analyses of the blood were and are still used for the routine diagnosis and especially for the metabolic survey in farm animals, such analyses, may be applied for the honeybee hemolymph (as a paraclinic examination). The aim of this experimental study was to investigate and to determine the reference values of the main biochemical parameters in the hemolymph of the healthy honeybees of Apis mellifera carpathica. The honeybee samples were collected in order to analyze the health condition of the respective colony. All the samples coming from sick colonies were removed, only healthy adult honeybees coming from strong colonies were kept and used for hemolymph collection. By special methods, samples of hemolymph (300 µl/sample) collected from about 50 individuals, were analyzed both during the active season (spring/summer) and the inactive season (autumn/winter). The study was carried out on 50 samples of undiluted hemolymph taken from a total number of about 2,500 honeybees. The following 21 biochemical parameters were analyzed: GLU (mg/dl), HDL-c (mg/dl), ALP (UI/l), T-cho (mg/dl), Tprot (mg/dl), Alb. (g/dl), BUN (mg/dl), LDH (UI/l), CPK (UI/l), Mg (mg/dl), FRA (µm/l), IP (mg/dl), GGT (UI/l), GOT (UI/l), GPT (UI/l), Ca (mg/dl), Cre (mg/dl), Amy (UI/l), T–BIL (mg/dl), TG (mg/dl), UA (mg/dl). The test was carried out after the collection and processing of the samples using the SPOTCHEM EZ_{SP4430}, equipment with dry kits, the slides technique, respectively.

Key words: *Apis mellifera carpathica* honeybees, hemolymph, biochemical parameters

ELECTRONIC EQUIPMENT TO MONITORIZE SOME BIOLOGICAL PROCESS OF ECONOMIC IMPORTANCE IN HONEYBEE COLONY AND ITS ENVIRONMENT

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The electronic hive is the result of the scientific researches carried out between 2003-2006 by a research project funded by MEdC through the National Program RELANSIN, being accomplished by Institute for Beekeeping Research and Development –Bucharest in cooperation with the Polytechnics University from Bucharest –The Center for Electronic Technology and Interconnection Techniques and the Radio Consult Company

To achieve the great complexity of the electronic model adapted to the hive –the "smart" hive, it was necessary to establish the all electronic details which to make possible to monitorize some very important information from the bee colony and its environment with the help of the honeybees and which to eliminate the errors that may occur in the information collection process.

Thus, the project aimed to conceive the electronic system in order to collect information from inside the hive and from environment too, to storage and transmit it to a data basis by GSM network in order to be analyzed and processed by users.

By this complex electronic system, composed by electronic equipment and the honey bee colony, which is dynamic and strong related with natural evolution of vegetation correlated with the climate factors, is possible to identify instantaneous or periodically a large palette of aggression factors as well naturals (acids rains, extreme temperatures, calamities) as anthropic factors –accidental chemical or biologic pollution. The obtained data, electronically quantified and taken out into the data basis, could offer accurate information about the moisturized areas at different time intervals.

Key words: honey bee colony, beehive, electronic equipment, environment

THE AGRO PRODUCTIVE CHARACTERISATION OF THE MULBERRY VARIETIES USED IN THE AMELIORATION PROGRAMS

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The germplasm stock of the mulberry from Romania includes 64 mulberry varieties from 5 Morus species, from which 16 are indigene varieties, 11 are Japanese, 13 Chinese, 14 from ex-URSS, 5 Italian and 5 Bulgarian.
Up to the present there were monitored 50 mulberry varieties with various proveniences, by filling in the Assessment Forms.
The agro productive characterization of these varieties is realised based on the Assessment Forms, in which it is observed the phenotypic and genotypic diversity of the vegetal sericulture germplasm stock; the agro productive parameters such as branch numbers/shrub, leaf surface, leaf weight, leaf production/ha, the protein content expressed in %SU, are significant.
The phenotypic and agro productive characters of the mulberry varieties are taken into consideration when choosing the parental forms in order to obtain some hybrid population that shall constitute the base for new mulberry varieties selection.
Key words: mulberry germplasm stock, mulberry varieties, phenotypic and genotypic diversity, assessment form

STUDIES CONCERNING SOME TRAINING ASPECTS IN SPORT HORSES

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Show jumping is a competitive international event, and is one of the world's most popular equestrian sports. There are many determining factors involved in the obtained results of a horse-rider couple. Always trainers and riders want to improve jumping performance and ability in horses. As a result the schedules of training are different from horse to horse, from the competition season to the winter season, from a team to another of course all these linked to the level of performance. Thus, in our country, many horse-people have gained knowledge through years of experience and word of mouth, and not through scientific literature. This is where science meets the art, and it's up to the rider to adapt himself. The purpose of this paper is to analyze and compare some aspects of the training programs in eight riding locations. For each base was registered the specific training program, the afferent training arenas, paddocks, other equestrian facilities and hygiene horse conditions with individual observations.
Key words: Training, Schedule, Jumping.

ATTEMPTS FOR OPTIMIZATION THE GENETIC IMPROVEMENT ACTIONS IN HORSE POPULATIONS OF *NONIUS* VARIETY AND *ARDENNES* BREED FROM THE IZVIN STUD, TIMIŞ COUNTY

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Researches were carried out on horse populations of Nonius variety and Ardennes breed from Izvin Stud, farm that belongs to the Forestry Direction Timiş. In Romania, Nonius variety built up at the Mezohegyes Stud in Hungary was imported at Bonţida and Ruşeţu in year 1920. In year 1940, the two types of Nonius were blended and were raised together at the Parţa Stud, called later Pădureni Stud. There stayed until year 1967 when the horse population was moved to the Izvin Stud, where is raised together with the Ardennes horse imported from Hungary as well. The aim of the present study was to attempt to optimize the genetic improvement actions of the horse population from Nonius variety and Ardennes breed raised at the Izvin Stud. For Nonius variety the main genetic improvement objectives were set up as being the improvement of the reproduction traits, correction of the gait in horses, increasing the energetic capacity, temperament and nervous impulse, as well as other conformation traits. For the Ardennes breed the main genetic improvement objectives were considered to be the increase of the constitutional strength, correction of the gait and improvement of the reproduction indices. The study was ended with a number of conclusions and recommendations.

Key words: genetic improvement, horse, heritability.

THE ANALYSIS OF REPRODUCTION INDICES IN THE TRANSYLVANIAN HALF-HEAVY HORSE BREED IN BECLEAN STUD FARM

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The values of the main reproduction indices for the Transylvanian half-heavy horse material from Beclean stud farm are presented and analysed in this paper. The analysis is based on the data obtained from the evidence of the reproduction activity of 126 mother mares, data recorded in the period between 2000 and 2006. The most significant indices have been rated, as the number of cycles/gestation, the number of matings/gestation, service-period (SP), gestation period (GP) and the period between bringing forth. The studied indices have been determined based on the number of bringing forth, on genealogical lines and on the entire population and according to the male stud used for mating. The connection between the puerperal period and the main reproduction indices has also been estimated. The average values of the analysed reproduction indices show a normal evolution of the reproduction function for the Transylvanian half-heavy mother mares, a value that can be highlighted by creating some absolute accordance between the biological requests of this breed and the technological conditions which are provided for them.

Key words: Transylvanian half-heavy breed, reproduction indices.

RESEARCH REGARDING LIPIZZAN COLT BREED BEHAVIOUR, IN THE STUD FROM SÂMBĂTA DE JOS

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The paper presents the colts' behaviour represented by Lipizzaner breed, of different ages, from the stud in Sâmbăta de Jos, Braşov County. Using the method of free and direct observation, timing, photo taking and recording, the 24 hour activities of the animals have been traced, recording the frequency and duration of several stages: decubitus, relaxing, sucking, feeding, movement, sleeping, defecation and urination. The tracing and replacement of technological shortcomings lead also to the replacement of some unwanted events which cause useless sufferance.
Key words: behaviour, Lipizzaner breed, colt.

THE TRIAL OF FOUNDING THE DEPENDENCE BETWEEN THE SIZE OF HOOF SOLE AND BIOMETRIC MEASUREMENTS OF HUCUL HORSES

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Hoofs are an important part of horse body and significantly influence its usability. According to irregular weight of horse limbs, fore-hoofs and hind-hoofs differ with the shape, the angle of fore-wall inclination and size but they should be proportional to horse body size. The objective of this study was the trial of founding the dependence between the size sole surface of fore- and hind-hoofs and biometric measurements of Hucul horses. Contours of left fore- and hind-hoof were collected from 50 Hucul horses from Gładyszów Stud (7 stallions and 43 mares). The contours were scanned in 1:1 scale and using the AutoCad computer program the surface and circumference of hoof sole were evaluated. At the same time the biometrical measurements were taken from mentioned horses – height at withers, girth and cannon circumferences. In studied population the surface and circumference of fore-hoofs were significantly higher than of hind-hoofs. Biometrical measurements and indexes counted highly significantly and significantly affected the surface and circumference of Hucul horse hoofs. Horses with higher height at withers and higher girth capacity were characterized by significantly higher surface and circumference of hind-hoofs than in horses with lower height. Highly significantly higher sole surface and circumference of fore-hoofs was shown in horses with higher cannon circumference.

Key words: hoof sole, biometric measurements, Hucul horses**.**

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REASONS OF ELIMINATION OF THOROUGHBRED HORSES FROM BREEDING

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The basic aim of each stud activity is such a breeding which allows obtaining the best horses. Breeding profitability depends, among others, on number and way of elimination of horses in particular studs. The object of this study was to compare the causes of elimination of Thoroughbred horses from two different studs. According to horse age and sex the causes of elimination was analysed for 843 horses in 1993-2004 from Krasne and Kozienice studs. The percent of elimination for each group was calculated according to the number of broodmares in the stud during 12 years. The main cause of elimination of horses was their sales. In Krasne stud more horses were sold to Polish (40.8%) and abroad (9.6%) breeders compare to Kozienice stud where most animals were sold as usability horses (40.2%). In all mentioned causes the significant differences between studs were shown. In the group of foals the main reason of elimination was the death caused by diseases and accidents. In Kozienice stud losses caused by this factor were significantly higher (for 5.3%) than in Krasne stud. One- and two years old horses from Krasne stud were more often sold to Polish breeders (10.7% and 5.3%) comparing to Kozienice stud where horses from these groups were mainly sold as usability horses (13.1% and 3.7%). In the groups of mares and stallions dominating way of elimination was the sale for Polish breeding or sale as usability horses. Stallions were also sold for abroad breeders – from Krasne stud significantly more (for more than 4.0%) than from Kozienice stud.
Key words: Thoroughbred horses, elimination from breeding

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STUDIES REGARDING THE SPEED PERFORMANCES IN FRENCH TROTTER

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The paper presents the analysis of speed aptitudes in French Trotter, breed which due to its performances, can be used in time as infusion material for Romanian Trotter breed. The studies were carried on 279 heads, data being processed through usual statistic methods, on age categories, depending on parental performances and depending on the stallion which the animal taken in study comes from. As a result of studies, it was found that the variability of speed aptitudes for trot is influenced by the age of individuals, origin and genetic line which they come from, by technological factors of exploitation (feeding, maintenance, training and dressage, the young stock of breeding conditions), as also the good practical of management in studs.
Key words: French Trotter, speed performance, trot.

GROWTH RATE OF ARABIAN FOALS

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Arabian horses are treated as one of the most noble horse breed in the world. It is also one of the oldest breed known as a root of many other breeds. Opposite to Thoroughbred horses Arabian ones are very healthy, easy to keep with low fodder demand. They are still incredibly resistant to environmental conditions. Growth and development of foals is also very interesting because it is more similar to growth of primitive than to noble foals. The object of this study was to analyse the growth rate of Arabian foals bred in Poland. 382 foals born in Bialka Stud in 1983-2003 were taken under consideration. The height at withers, girth and cannon circumference measured at 1 day and 6 and 18 months of life were analysed. On this base the growth rate was calculated. Horses were divided into different groups according their year of birth, sex, coat colour and sire and dam lines. The statistical differences between particular groups were evaluated. It was stated that year of birth affected significantly the growth rate of Arabian foals. Colts were characterized by significantly higher growth rate of cannon circumference. Horses of different coat colour did not differ in growth rate of any parameter. Affiliation to particular sire and dam lines had some effects on growth rate of Arabian foals.

Key words: Arabian foals, growth rate, height at withers, girth circumference, cannon circumference

BIOMETRICAL ANALYSIS OF ARABIAN FOALS AND THEIR LATER SUCCESSES IN SHOWS AND ON RACE TRACK

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Arabian horses are one of the most important products of Polish horse breeding. Many of them are International and World champions in shows; others are very well known as courageous race horses. To obtain such champions it is necessary to take under consideration many factors affecting the final results. The objective of this study was to evaluate the effect of biometrical measurements of the foals at birth according to their future successes in shows and on racetrack. The study was carried out on 143 horses winning in shows and in races. Body weight, height at withers, girth and canon circumferences taken at birth of these horses were analysed. Additionally coat colour was studied. All studied animals were divided into three groups according to each measurement and the differences between such groups were evaluated according points obtained for particular place at shows and place in races. It was stated that horses heavier at birth and with higher girth circumference got more successes both at shows and on racetrack. Horses with higher height at withers at birth were more successful in shows while animals with higher canon circumference won oftener at race track. It was observed that the most courageous race horses were bay while most champions were grey.

Key words: Arabian foals, biometric parameters, shows, races

RESEARCES REGARDING THE SANGUINE CORTISOL EVOLUTION, AS BIOCHEMICAL INDEX, IN SPORT HORSES IN COMPLETE HORSE TRIAL

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Using the horse for sport activities needs a good training and an optimization of physical and psychical qualities, both contributing to achieve the wanted performances. Physical effort impose to the horse in different competitions is a stress situation, fact which induce an endocrine answer, materialised through increasing the sanguine levels of some hormones and decreasing of others. The purpose of this study was to verify if the training and the effort intensity is reflected in the sanguine cortisol behaviour in sport horses.
Key words: sport horses, cortisol, complete trial competition.

RESEARCES REGARDING THE TRIGLICERIDS EVOLUTION, AS BIOCHEMICAL INDEX, IN SPORT HORSES IN COMPLETE RIDDING TRIAL

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Energetic capacity and the resistance at effort in sport horses are necessary to be objectively evaluated. There are some practical ways which serve to measure exactly the training length and intensity and also to appreciate the effects of these over the physical level of training. The purpose of this study was to observe the triglycerides evolution, in sport horses in real situation of complete ridding trial, obtaining maximum of performances in safe conditions for the horses' health. The biologic material to determine the triglycerides values was randomly established and was represented by 15 sport horses, very well trained. The analyses were done before and after effort.
Key words: sport horses, triglycerides, complete trial competition.

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STUDIES ON THE CONTRIBUTION OF THE PUBLIC MATING STALLIONS FROM ARAD STATION ON LOCAL HORSE IMPROVEMENT

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Public Mating Stations are state's units which are breeding stallions produced by the National Stud farms. They are maintained there only for one reason: to be used for reproduction and improvement of the local horse populations. Each Stallion Station has its own territory on a geographical determined area, in this case Arad, Bihor and Hunedoara counties. In the mating season, almost all of the stallions are allocated (by breeds and demands) for a group of communes where mare owners asked for them.
Key words: public mating stallion, improvement, mare.

STUDY ON SOW CULLING RISKS IN A LARGE-SCALE PIG FARM[1]

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Sow culling is a significant task for animal breeders and farmers; moreover, it provides a basis for profitable pork production as well. The reason for culling the majority of sows is their low productivity. 15-20% of culled sows farrows only once, and sows in product-manufacturing farms generally do not live until their 5. farrowing cycle. Depending on farm potentialities, it can have several reasons. Our study has investigated data from 1969 sows culled in 2005 in a large-scale pig breeding farm with 3000 sows in Hajdú-Bihar County. Our results were calculated by one of the non-parametric forms of Survival Analysis, the Kaplan-Meier analysis. Mortality intensity was quantified by one of the other models of Survival Analysis, the log-rate exponential model. In terms of culling, we have determined the risk values of different genetic potentials and various culling reasons.
Key words: sow culling, risk, Survival Analysis,

STRUCTURE OF FOOD CONSUMPTION IN ROMANIA DURING 1990-2002, COMPARED TO THE E.U.

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In order to accomplish this work, we have investigated the statistical data available so far, analyzing food consumption in terms of quantity and of quality as well. With regards to quantity, food consumption in Romania is below the E.U. mean for most food products, excepting cereals and potatoes. In terms of quality, the structure of food consumption in Romania represents a deficit, because of the low amount of animal-based calories. Regarding the structure of the protein intake, the amount of animal-based proteins is 20% smaller than in the E.U. countries. In agriculture, an important role is played by self-consumption, but the less developed the agriculture is, the bigger the amount of self-consumption within the total production is, and conversely. The direct family consumption within the total agricultural production represents a high amount, i.e.: in Romania 58%; Bulgaria 54%; Lithuania 46%, Latvia 45%; Poland 37%, the smallest consumption being present in The Czech Republic – 27%.

Key words: food, consumption, self consumption

"FOCUS-GROUP" STUDY CONCERNING MEAT CONSUMER`S BEHAVIOR IN THE CITY OF TIMISOARA

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Focus-group is an exploratory qualitative research, a demi-structured interview which allows us to get to know the consumer`s perceptions, reasons, feelings, needs and attitudes. This technique has been used to make evident what especially determines the consumers to choose a certain meat sort. The research has been carried out on two groups, in the city of Timisoara. The objectives aimed at within this research were: determination of the consumer`s motivation for a certain meat sort; correlation between lifestyle and meat sort; consumption habits. The main tool was represented by the interview guide, in which we have used open questions in order to hear our subjects` opinions concerning the meat consumption, open questions for their familiarization and introductive questions, with the help of which we introduced the subjects to the theme of this research.

Key words: consumer, meat, focus-group

MARKET RESERVES IN RELATION TO SEASONALITY

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The European Union permanently relies on import of lamb and goat. More than 90% of the Hungarian sheep meat export goes to the Italian market, while the majority of the rest to Greece. More than 90% of the turnover of sheep sector (12-13 billion HUF) is from lamb sales. Based on the data of Hungarian lamb export, it can be stated that farmers achieve the highest and lowest prices at Christmas and in May, respectively. Prices fluctuate the most in the Easter period, since the supply is the greatest at this time. The average selling weight at Easter and at Christmas is 1-2 kg lower than the 21 kg average weight of eight years.
Key words. lamb export, seasonality, purchase price, average weight

THE STUDY OF THE OFFER FORMING SOURCES AT THE CATTLE MEAT IN TIMIŞ COUNTY

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For this study were used the basic methods of investigation: the analyze, the synthesis and comparison in time and space using the typical economic indicators. The paper presents the grouping of county's localities depending on the animals number bred at 1000 inhabitants, the grouping of the localities according to the animal number per 100 ha, the grouping of the localities according to the meat product achieved per inhabitant annually, the grouping of the localities according to the meat product achieved per ha annually.
Key words: cattle, economic indicators

THE STUDY OF THE OFFERAT FORMING SOURCES AT THE CATTLE MEAT IN GORJ COUNTY

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Key words: cattle, economic indicators

THE CHARACTERIZATION AGRICULTURAL POTENTIAL IN THE VEGETABLE AND THE ANIMAL AREA IN FOUR COUNTIES FROM TRANSILVANIA

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In this study I present some comparative element concerning agricultural potential in some counties from Transilvania (Alba, Bistrita Nasaud, Cluj and Mures). This elements makes repport to the total agricol surface and the categoryes of agricol ground (APF) on groups of fertilisation, bread structure, the totale and queen efective of cattle (buffalo and cattle milk). Total surface which was in research is by 2444505 ha from which 1464890 ha are agricol surfaces which represent 59.73% from the total surface. Analysed in what looks the categories lot of APF, arable, pastures and hay fields, the surface is placed somewhere to 1366612 ha from which 600059 ha arable, 483958 ha pastures and 282795 ha hay fields, with weight from total of 43.91%, the pastures with 35.41% respectively 20.69% for the surfaces of hay fields. . The totals effectives from the 4 involved counties are of 333891 heads from which 61.77% quene, that is 206252 heads. From the totale quene efffective, cows represents 95.05% and buffalo milk 4.95%.

Key words: agricol surface, productiv potential, cattle efective.

MONTE CARLO SIMULATION OF TECHNOLOGICAL RISKS IN CHICKEN PRODUCTION IN A BAYESIAN APPROACH

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Simulation models are often applied in several areas of animal breeding in order to analyse risks and to choose from different decision-making strategies. Several models do not treat the uncertainty of input variables because of the difficulties of modelling. Many researchers apply Bayes' statistics in their simulations to model risks and uncertainties and to include preliminary information in the model. On the basis of data from a company breeding broiler parents, our paper examines the technological risks of breeding a laying-hen stock with a simulation program developed by our team. The mathematical basis of this program is a Monte Carlo simulation combined with Bayes' statistics. Both the mathematical background of the program and its applicability in risk analysis are presented.
Key words: Monte Carlo, Risk analysis, Chicken production, Bayessian statistics

MARKET RESERVES IN RELATION TO SEASONALITY

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Key words. lamb export, seasonality, purchase price, average weight

REDUCING THE ECONOMIC RISK OF ANIMAL HUSBANDRY BY ADAPTING ACQUISITION STRATEGIES FOR OPTIMAL FEED COMMODITY

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Among the costs of animal husbandry – regardless of the animal species in question – the most significant is that for feed. Among the different crop years, we can notice great divergences in the prices of seed feeds. This phenomenon is associated with significant seasonal factors in each year. These prices and yield fluctuations increase notably the economic risk to animal husbandry. In the course of our research, we adapted and developed deterministic inventory models to create different acquisition strategies. For us the most appropriate choice among the possible strategies is that which is secured by maximum income, combined with alternative investment possibilities.

Key words: risk, feed, deterministic inventory model, acquisition strategy, financial model.

STUDY UPON MILK MARKET IN THE CENTRAL AND EASTERN EUROPEAN COUNTRIES

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This study presents milk market in the CEECs in the period 2001-2005 based on the statistical data provided by FAO Stat and other information sources. In the year 2005, the CEECs-12 raised 6,858 thousand dairy cows, producing 29,393 thousand tons whole fresh milk, of which 7,322 thousand tons (24.91 %) were exported. Poland, Romania, Lithuania and Czech Republic are raising 80 % of cows stock. The main milk producers are Poland, Romania, Czech Republic, Hungary, Lithuania and Bulgaria and the main milk exporters are Poland and Czech Republic. The increased average yield gave its substantial contribution to milk production performance. Milk consumption is in average 204 kg/capita, but there are big differences from a country to another. The CEECs represent an important milk source for the EU market.
***Key words**: dairy cows, milk, production, consumption, producer price, export and import, CEECs*

RESEARCH CONCERNING ECONOMIC EFFICIENCY IN MILK PROCESSING

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The paper presents a study case concerning economic efficiency of dairy products at Agro Industrial Milk Processing Company Baneasa , Bucharest . The most effective dairy products are pressed cheese, green cheese, superior cow cheese, sheep cottage cheese, fresh cow cheese and whip cream. Production cost varies according to processing technology, specific consumption, price of raw materials, auxiliary materials, labor, energy, water. The company registered the highest profit Euro 18,421 and the highest profit rate 15.32 % in the year 2004. The continuous increase of inputs and manufacturing costs has a deep impact on efficiency.
Key words: economic efficiency, milk processing, Agroindustriala Milk Processing Company Baneasa, Bucharest

STUDY REGARDING THE LEGISLATIVE CONDITIONS IN THE EUROPEAN UNION IMPORT FOR FRESH MEAT AND MEAT PRODUCTS

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The European Union is by far the biggest importer of food worldwide. Import rules for meat and meat products are fully harmonized and the European Commission acts as the competent authority on behalf of the 25 Member States. The EU Commission is the sole negotiating partner for all non-EU countries in questions related to import conditions for meat and meat products.
Key words: food, meat, health, food law, consumer, safety, hygiene.

THE LEGISLATIVE CONDITIONS IN EUROPEAN UNION IMPORT FOR SEAFOOD AND OTHER FISHERY PRODUCTS

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The European Union is by far the world's biggest importer of fish, seafood and aquaculture products. Import rules for these products are harmonized, meaning that the same rules apply in all EU countries. For non-EU countries the European Commission is the negotiating partner that defines import conditions and certification requirements. Also, for most countries with existing trade, the European Commission negotiates on behalf of the 27 Member States.
Key words: fish, mollusks, aquaculture, import rules, safety, seafood.

BIO-ECOLGICAL PHENOMENON OF POLY-PARASITISM – ACTUAL MAJOR PROBLEM IN BREEDING OF SHEEP AND GOATS

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The paper presents the results of a extensive study concerning the parasites and complexe problems of the poly-parasitism on sheep and goats in Dobrudja. In this paper we proposed ourselves to establish the sheep and goats endoparasites, the distribution and frequency of these function to age, sex and maintenance conditions. The increase of morbidity through parasitical diseases, as well as the ecological and economic consequences of poly-parasitism represent a important problem in the integration conditions of Romania in UE and imposes to apply some efficient methods of prophylaxis and control of parasitosis and parasito- zoonozis. The drawing of copro-parazitologic samples was effected directly from rectum of sheep and goats, testing 10% of each lot, during grazing season and in period of keeping in sheds. The copro-parasitological examinations were carried out ***ovoscopicaly*** *(flotation, by next methods: Willis, Mc. Master and sediment, by Benedect-Nemesseri and polyvalent methods), as well as* ***larvoscopicaly*** *by Baermann method. After copro-parasitological examinations of samples which were harvested from these animals it comes out that both sheep and goats presents poly-parasitism with sporozoa (****coccidiae****: Eimeria spp.) ,* ***cestodae*** *(Moniezia expansa and Moniezia benedeni),* ***gastro-intestinal nematodes*** *(Nematodirus spp. ,Trichostrongylidae, Strongyloides papillosus) and* ***pulmonary nematodes*** *(Protostrongylus rufescens, Dictyocaulus filaria, Muellerius capillaris), the degree of parasitical infestation depending on species, age, sex, maintenance conditions and environmental factors.*

Key words: polyparasitism, sheep, goats

FATTENING CAPACITY OF MERINO OF CLUJ SHEEP WITHIN DIFFERENT SYSTEMS

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Merino of Cluj is breed was founded during 1959 – 1988, within the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, as result of the work performed by research team coordinated by Professor Augustin Pop. Turcana breed (white variety, Sibiu ecotype) was used as maternal line, and Transylvanian Merino as paternal line. Merino of Cluj bred frames within mix morpho-type "meat-milk-fine wool", well adapted to hilly areas with high precipitation level.

In context of reorientation of the production directions, the breed is suitable for meat production being exploited on both pasture and intensively. When pasture fattening was performed for 150 days, body weights of 37.75 ± 0.30 kg and 42.00 ± 0.17 kg were recorded in the end of the fattening period, function of feeding level. When 100 days intensive fattening was performed, body weight of 40.62 ± 0.40 kg was recorded in the end of the fattening period. The average daily accumulation of body weight, when pasture fattening was performed, recorded values between 107.06 and 136.66 g, and 251.00 g when intensive fattening was performed.

Key words: young sheep, fattening on pasture, intensive fattening, Merino of Cluj

THE TRAITS AND PROCESSING AVAILABILITY OF WOOL OBTAINED FROM SHEEP SPECIALIZED FOR MEAT PRODUCTION

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The purpose of this researches was to analyze the quantitative and qualitative parameters of wool obtained from the Palas sheep population specialized for meat production and to assess the processing availabilities of this fibres type.

Average values recorded for the main wool traits ranged between the following limits: wool production 2,78 ÷ 4,92 kilos; fibres fineness 22,51 ÷ 24,32 μm; fineness variability (CV) 23,67÷26,74 %; staple length 7,08 ÷11,19 cm, length variability (CV) 15,12 ÷18,15 % ; scouring yield 48.95÷52.38% and the yield variability of 7.83÷10.52%. .This wool has a technological value similar to that obtained from the fine wool sheep breed (merino type).

Keywords *:* sheep specialized for meat production,; wool production; wool fineness ; staple length; yield

MORPHO-PRODUCTION AND REPRODUCTION TRAITS OF THE COLOUR VARIETIES BELONGING TO THE BOTOŞANI KARAKUL BREED

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*To achieve this experiment, the biological material was represented by the Botoşani Karakul sheep, ewes and rams of different age categories and of different colour varieties (black, greyish, brown, grey, pink and white). The animals proceeded both from the elite farm of the R.D.S.S. Popăuţi and from the production and private farms from the breeding area of this breed. The Karakul breed is specialized for the lamb pelt production. The classical colours are black and greyish. The genetic base of creation of new colour varieties was represented by black and greyish sheep which constitute a continue source of numerical and qualitative increase of these varieties applying adequate reproduction and selection technologies. The main morpho-production traits of sheep were mentioned, as follows: the qualitative features of lamb pelts, the body growth, the body conformation and constitution, reproduction aptitudes, milk production, framing in the specific parameters of the Botoşani Karakul breed***.**

Key words: Karakul sheep, reproduction, selection, colour varieties.

INVESTIGATIONS IN THE EFFICIENCY OF USING ICAR STANDARDISED METHODS AC AND AT TO RECORD MILK YIELD IN SHEEP

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The paper presents the results of the experiments conducted using the standardized methods recommended by ICAR (International Committee for Animal Recording), AC and AT to record milk yield in sheep. The experiment used Karabash sheep raised in the experimental farm of INCDBNA Balotesti. The experimental methods AC and AT are simpler than other methods and require individual milk yield recording at just one of the two daily milking sessions. The paper presents the results obtained with ICAR methods AC and AT compared to the Romanian "Method of the control coefficient" developed by Th. Nica and B. Dermengi. The paper also gives recommendations on the selection of the most efficient method of recording to be used in the selection of sheep for milk in Romania.
Keywords: sheep, record milk yield, ICAR

IMPORTANT TRAITS IN KARAKUL LAMB SKIN

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In the paper it emphasizes the importance of inheritance of colour variation and of breeding problems, important traits affecting the price of the production fur traits. It is therefore an attempt to highlight those aspects which can make an impact on the improvement in Karakul pelt production. From an economic point of view, it has been shown by various authors that within different colours, the pelt price is predominantly determined by curl type, pattern score, hair quality score and hair length traits. Traits such as pelt thickness and hair thickness are also correlated to the price, though their contributions are minimal. It was furthermore indicated that the relative weight for pattern score becomes less important and for hair quality score it becomes more important with a decrease in curl development. Properties such as colour intensity become more important in the coloured pelts.

Key words: lamb, skin, curl type, pattern score, hair quality

ASSOCIATIVE ASPECTS OF THE BLOOD POTASSIUM TYPES WITH THE QUANTITATIVE PRODUCTIONS IN ADULT SHEEP OF THE BOTOSANI KARAKUL BREED

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The associative analysis of the potassium phenotypes with the quantitative production traits in adult sheep of the Botoşani Karakul breed pointed out the production superiority of the HK phenotype in rams concerning the both body weight and wool production. The ewes with HK phenotype are slightly more productive than the LK ewes concerning the wool production. The production superiority of the LK phenotype was found in females for body weight and total milk quantity. Statistically, the difference values of the quantitative productions between the two potassium phenotypes are very close to the 5% significance threshold in the adult rams and insignificant in the adult ewes. The utilization of the kalium system in sheep breeding of the Botoşani Karakul breed for quantitative productions must be made with accuracy because the association of the LK phenotype with the qualitative features of the lamb pelts and with the health status is better than with the HK phenotype.

Key words: Karakul sheep, potassium phenotype, production traits.

COMPETITIVENESS OF HUNGARIAN SHEEP SECTOR IN RELATION TO OTHER EU COUNTRIES

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Hungarian farmers became as entrepreneurs into the EU, where they found themselves in a competition, which has special conditions. Farmers found themselves within new land-, ownership-, and tax conditions, which required conscious entrepreneurial behavior and thinking. In this special situation sheep industry and (at farm level) sheep farmers also have to survive, develop, and face to new possibilities, produce competitive products for the present and future markets. On the course of the examination the competitiveness parameters of Hungarian sheep sector we analyzed the domestic and international statistics. The level of measurement required an overall consideration of sheep production in EU-25 countries and also the of the Easter-European countries. Period of time covered a long term (from the year 1990) to base complex and reliable findings and conclusions.

Key words: Competitiveness, Sheep sector, Hungary, Romania, Bulgaria

EXPERIMENTAL MODEL OF INFESTATION IN OVINE OESTROSIS

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The experimental model was been performed on 20 youth sheep, between 10-11 months aged who were divided in two groups. The first group (10 animals) contains only healthy animals and represented the control group. The second group (experimental) contains experimental infested animals with Oestrus ovis larvae, of first stadium of evolution. Each sheep was been inoculated with 30 larvae on intranasal way. After three months from experimental infestation, the animals were been slaughtered and was made the necropsy. Were evaluated the morphopathological alterations and were been discovered the Oestrus ovis larvae. From the inoculated larvae 3 months ago were been founded 57.66 %. From these, 16 % were on I stadium, 37.33 % II stadium and 4.33 % III stadium of evolution. No clinical evident sign was observed in experimental infested sheep. This fact is in concordance with other researchers observations, who demonstrated that the clinical reproduction of disease can be obtain only after 3-4 experimental administrations of Oestrus ovis larvae.

Key words: Oestrus ovis, necropsy, morphopathological alterations.

THE DIAGNOSTIC VALUE EVALUATION OF SPECIFIC IMMUNE RESPONSE THROUGH IMMUNODIFFUSION SIMPLE RADIAL TEST (I.D.S.R.) APPLICATION IN OVINE ESTROSIS

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Were been examined 20 blood samples from reformed sheep with ovine oestrosis. The sheep were then slaughtered and the necropsy of their heads confirms the presence of Oestrus ovis larvae. A brut antigen was prepared from O. ovis larvae from I, II and III stadiums of evolution, after Bautista method (1982), with a proteic content of 3.84 total protein/ml serum (P.T.). The obtained results after I.D.S.R. test emphasized that O.ovis larvae induced in infected animals immunological reorganizations characterized through antibodies synthesis in dependence on infestation degree. The results of I.D.S.R. test indicates this method for an immune reaction through antibodies syinthesis evaluation in O. ovis infested sheep, but it can't be use for an ovine oestrosis diagnostic purpose, because has 0.83 sensibility and 0.50 specificity.

Key words: immunodiffusion simple radial test, stadium of evolution, sensibility, specificity.

ELABORATING THE TECHNOLOGY OF FEEDING THE MILKING SHEEP DURING THE PERIOD OF COUPLING PREPARATION AND COUPLING

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The studies made on sheep specialized on milk production watched to establish fodder ratios and the technology of foddering the sheep in the second milking period and preparation for coupling. The witness lot was fed with green mass by grazing, at the 2nd lot it was used the pasture + 200 g concentrated fodders/animal/day, and at the 3rd lot, the pasture + 400 g fodders/animal/day. The consumption of dry substance/animal/day was similar at the 1st and 2nd lots, that of 1.57-1.51 kg, and at the 3rd lot of 1.68 kg, bigger with 7-11% beside the other two lots. The intensity and synchronization of the heat periods were with 32-61% better in the case of the sheep that were supplementary fed. The supplementation of grazing with concentrated fodders had a positive influence upon the body weight of the sheep, at the 3rd lot the body weight of the sheep in the beginning of coupling being superior with 11.40% comparatively to the weight at lambs' weaning. The average milk production per lactation was of 138.9-153.8 liters, being bigger with 10.7% at the 2nd and 3rd lots, comparatively to the 1st lot. The chemical composition of milk had a content of dry substance of 18.95-19.05%, 6.31-6.41% proteins and 6.99-7.24% fats.

Key words**: *fodder ratios, sheep specialized on milk, preparation for coupling, coupling***

ELABORATION AND EXPERIMENT OF THE TECHNOLOGY OF STIMULATING FEEDING OF FEMALE SHEEP YOUTH FOR EARLY COUPLING

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In order to precociously introduce the female sheep youth from the population specialized in the milk production in the economic circuit; we proceeded to elaborating and testing optimum technologies of foddering which to evidence the maximum exteriorizing of the genetic potential. The experience was developed on three lots of female sheep youth. The lots were analogue and homogenous under the aspect of the genetic type, age and body weigh. The 1st lot was fed with green mass by grazing, the 2nd lot with grazing + 200g of concentrated fodders/animal/day, and the 3rd lot III with green mass by grazing + 300 g concentrated fodders/animal/day. At the 1st and the 2nd lot the consumption of dry substance was of 1.02-1.05 kg/animal/day, and at the 3rd lot, of 1.13 kg/animal/day, the latter consuming with approximately 9.7% more comparatively to the first two lots. At the date of introducing to coupling, the body weigh was 60.6% at the 1st lot, 66.8% at the 2nd lot and 70.4% at the 3rd lot, from the body weigh specific to the adult female. At the first sexual cycle, the proportion of females which entered the sexual heating was bigger at the 2nd lot with 30% and at the 3rd lot with 40% comparatively to the 1st lot. From the total of females from each lot, 33.3% at the 1st and the 2nd lot and 46.7% at the 3rd lot were supposed to be pregnant. The female sheep youth which have at the age of 10-11 months a body weigh of at least 65%, manifest a sexual cycle in a proportion of 70-80% and become pregnant in a proportion of 55-65%.

Key words: female sheep youth, fodder ratios, stimulating feeding, early coupling

PHENOTYPIC PARAMETERS IN THE TSURCANA BREED YEARLINGS FROM S.C. EXIM AGRO. OVIS MPS. SRL FIBIŞ –TIMIS COUNTY

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Global wool production is approximately 1.3 million tones per annum of which 60% goes into apparel Unfortunately, the total percentage of wool used for textiles has shown a dramatic decline in the past decades, but this has been almost entirely due to the increasing supply of synthetic fibers and the total weight of wool produced has in fact remained fairly static. However, fortunately the demand for natural products has raised the demand for woolen garments, particularly in developed countries. Therefore phenotypic parameters like live weight, fleece weight and staple length have been estimated for 100 yearlings' ewes and rams from S.C. Exim Agro.Ovis MPS. SRL Fibiş. Tsurcana yearling ewes had a medium weight of 38.06-±0.165 kg, the grease fleece weight of 2.77±0.198 kg and the staple length of 28.49±0.170 cm. Yearling rams were lighter with only 37.57±0.25 kg, while the grease fleece weight was of 3.20±0.19 kg and the staple length of 19.16±0.35 cm.
Keywords: yearling ewes, yearling rams, fleece weight, staple length, body weight

PHENOTYPIC PARAMETERS IN THE TSURCANA BREED-RAMS AND DAMS, FROM S.C. EXIM AGRO. OVIS MPS. SRL FIBIŞ –TIMIS COUNTY

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Sheep are a multi-purpose animal, raised for meat, milk, and wool. They are also valued for their skins and hides. Increasingly, sheep are being used to control unwanted vegetation. Sheep can use practically all types of forage, including crop residue and even ditch banks. An abundance of forage is one key to profitable sheep production. In Romania Tsurcana breed is ancient and it is still breed by the farmers being rustic and eat almost any fodder. In the Tsurcana rams from S.C. Fibis S.A Timis County, the body weight in 2006 was on average of 59.8181-± 07264 kg. The same 66 studied rams had a wool production of 3.80±0.056 kg/ ram, while the staple length range between 27 and 32 cm, with a mean of 29.4769±0.204 cm. The lower value of the variability coefficient of only 5.60% was registered for the staple length of the rams, which means that the genetic structure of this population is homogeneous.

Key words: rams, body weight, wool production, fleece length

DESIGNING STUDY FOR A FAMILY FARM WITH 600 GOATS

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In the hilly and plains area of Banat region, goat rearing for milk production has chances to become a profitable business. After Romania integration into the EU market there will be no quotas for goat milk and meat production. Also, important low-production arable land areas (over 3 million hectares) will be laying fallow in the next years, spectacularly increasing the fodder area for ruminants. There a few goat family farms having an efficient technological flow and with possibilities to process the milk in Romania. In this paper the bases are laid down for projecting a farm with 600 indigenous goats, to be exploited in an intensive system and genetically improved with Sannen or French Alpine he-goats. The following reproduction indices were planned for the 600 goats: goats in estrus per season 96%, fecundity 95%, goats that keep the pregnancy 98%, kidding goats 90%, prolificacy 170%, and birth rate 152 kids for 100 dam goats. The total population after weaning the kids is 600 goats, 24 he-goats, and 173 reproduction female kids. For feeding this population 66.8 ha are required out of which 43.1 ha with grasses pasture, 2.1 ha alfalfa, 10.2 ha corn, 4.2 ha barley, and 6.6 ha oats. Goats are housed in 4 shelters, in 12 group pens of 48 heads. Goats will be fed year-round with grass haylage, oats straw and concentrate mixtures. This farm will produce 2250 Hl milk per year (mechanical milking), 150 reproduction female kids for selling at 8-9 months of age, 500 fattening kids, and 120 culled goats sold for meat. The annually estimated gross income will be 34000 EUR.

Key words: goat, goat farm project

STUDY ON SOME FACTORS INFLUENCING CONSUMPTION EGGS QUALITY

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Some results of a research, concerning the influence of the microclimate factors during eggs storage period on some specific physical and microbiological quality indices of the commercial consumption eggs, are presented within the paper.

In order to achieve the study goal, two of the three eggs groups were stored according to the classical storing conditions (short term=+10÷+11°C and 75% air moisture, respectively long term =+4°C and 90% air moisture), while the third group was stocked within the conditions existing to various traders (+20÷+25°C and 45% air moisture).The storage period counted 21 days and the quality assessments were done at the beginning of the period and then, at each 7 days.The comparative analysis of the studied physical quality factors, assessed at the beginning and at the end of the storage period, shown minor quality alterations (1.17-22.08%) in the groups stored "refrigerated", while major alterations were observed (4.57-48.49%) in the eggs stored in conditions simulating traders supply parameters.Moreover, maintaining the eggs at low temperature inhibits germ multiplications to only 5.88% from initial contamination, as compared to +46.45% germs payload on the shell, after the eggs storage at high environmental temperatures.

Key words*:* eggs, quality, storage

THE VARIATION OF SOME BIOCHEMICAL PARAMETERS FROM FRESH COW CHEESE CREAM TYPE WITH ADDED AROMATIC PLANTS

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Recent advanced studies in the field of cheese fabrication technology include, among other, the usage of aromatic plants and spices as a mean of improving the organoleptic properties and as a mean of decreasing the lipidic peroxidation phenomenon. For this purpose, three types of fresh cow cheese produced by S.C. Marion Invest Trade 94 SRL, experimentally added with dill, savory and rosemary, were comparatively studied from a chemical point of view (pH, acidity, humidity, ash) and a biochemical point of view(raw fat, total proteins, total cholesterol, acid phosphatase's enzymatic activity, superoxide dismutase's enzymatic activity, calcium content).

From a chemical point of view, no significant differences appeared between the cream cheese types analyzed, excepting the pH(lower in the cheeses with dill and rosemary)

From a biochemical point of view, two phenomenon can be observed: a significant decrease of the acidic phosphatase activity in the cheeses with added dill and rosemary (positively correlating with the pH value) and decreased values of the SOD activity in all cheese types.

Key words: superoxide dismutase, dill, savory, rosemary, cheese cream.

HACCP STUDY ON PORK SALAMI PROCESSING

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In order to be good for consumption, aliments must be adequate from the innocuousness point of view, respectively to be free of substances which may be found naturally or which arrived inside of then accidentally and which can damage the consumers' health.

Alimentary security and the aliments safety can be assured by HACCP system, which is a systematic method of establishment, estimation and check of the risks associated to the alimentary products.

The work emphasizes the risks linked to the raw materials, auxiliary materials, finished products, operations for the technological process, as well as the check measures and monitoring procedures witch must be applied when pork salami processing.

Key words: aliments, critical control points, salami

MATERIAL BALANCE FOR OBTAINING MUSSEL AND OYSTER CANS IN OWN JUICE AND OIL

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Seafood could be presented as food products with a great nourishing value and a special contribution to human nutrition optimization, but also as raw material for the processing unit. After the end of the Second World War, seafood production and consumption have followed and increasing trajectory. Thus, their production increased from 19 millions tons in 1950 to 39 millions tons in 1961, but 130 millions tons in 2002.

The present study proposed itself the analyze of processing 100kg/day mussels and oysters having in view the obtaining of two canned sorts (in own juice and oil) establishing the material balance for each sort. Upon the balance it can conclude that by processing the same amount of seafood it is obtained a larger amount of cans in oil.

Key words: mussels, oysters, cans, balance of material, output

QUALITY ASSESSMENT OF FRESH AND REFRIGERATED CULTURE STURGEON MEAT

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In order to assess the physical, chemical and biochemical modifications at the culture stellate sturgeon and beluga sturgeon meat, preserved through refrigeration, there have been determined the anatomo-ponderal characteristics, the nutritional constituents, and the effect of proteolytic enzymes by assessing the nitrogen compounds. At the age of 18 months with an average mass of 652.5 g% the chemical composition of the culture stellate sturgeon meat indicates a high content of water (77,8%), an average one of proteins (16.70%), and a low content of lipids (3.90%), the ash percentage being kept low and constant. In the case of the culture beluga sturgeon we have found a high content of water (84.12%), a relatively high content of proteins with biological value (14.98%) and a low content of lipids (1,1%). After 8- day storage of stellate sturgeon and a 12 - day storage of beluga sturgeon, the juvenile sturgeon proved a good stability during refrigeration and storage, showing no obvious signs of biological degradation.

Key words: culture sturgeon, stellate sturgeon (*Acipenser stellatus* Pallas, 1771), beluga sturgeon (*Huso huso* Linnaeus, 1758), proteins, aminoacids, nitrogen fractions, refrigeration.

STUDY CONCERNING THE QUALITATIVE PROPERTIES OF BUFFALO MILK, AS RAW MATERIAL TO BE INDUSTRIALIZED AT SC NAPOLACT SA FACTORY, CITY OF HUEDIN

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The researches are effected in S.C. NAPOLACT S.A. in Huedin, city of Cluj County, which is a private production factory for buffalo milk taking over and processing and for finite products' sale. The factory processes daily a buffalo milk quantity of 800 – 4000 liters. The raw material is acquired from many collection routes with autotanks. The assortment structure of factory is very different, being adapted to market requirements. The purpose of effected researches had in view main quality features' establishing of collected milk by factory for milk products and their effect on main finite products' features.
Key words: buffalo milk, quality, factory.

RESEARCHES CONCERNING THE PHYSICAL AND CHEMICAL BUFFALO MILK QUALITIES, AS RAW MATERIAL PRODUCED BY AN ECOLOGICAL FARM

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In the context of present problems referring to specific conditions in which the buffalo milk is produced and capitalized, the purposes of effected researches were directed to establish the main features of buffalo milk, as raw material destined to finite products' obtaining. The researches are done in Meszendorf farm, placed in a zone considered and certified as having ecological character. A prime aspect of effected researches puts into evidence the mainqualitative features of buffalo milk production obtained in Meszendorf farm, avowed "ecological zone", with mention that the milking is mechanically realized.
Key words: buffalo, ecological farm, milk.

THE CHANGES OF THE MILK QUANTITY AND QUALITY IN DAIRY COWS EXPOSED TO SOLAR RADIATION

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The purpose of the study was to observe the changes of the milk quantity and quality in cows exposed to solar radiation during the hot summer days.
The study was carried out in the period May-October 2000-2005 on groups of cows, belonging to Romanian Simental breed ,during the III-rd and IV-th lactation, bread in different conditions: on the pasture or in the stable.
The determined parameters were: the total milk production to characterise the milk quantity and the milk quality was characterised by: electric conductivity, the protein, the lactose, the fat content and the milk cells. These parameters were correlated with THI index during the summer days when it exceeds the value of 72, which is considered the limit of heat stress in cows.
It was encountered a decreasing of the total milk production with 26.46% in August, compared to May ($p<0.01$) which was considered the reference month, when the cows started grazing. The reduced milk production is correlated with THI values, between them being established a reverse proportional variation.
In cows exposed to sun it was recorded a reduction of the milk electric conductivity with 12.42% compared to the values obtained in the morning, being reverse proportionally correlated with THI values. In cattle exposed to heat stress are recorded changes in milk composition, meaning the reducing in fat content (12,97%, $p<0,05$) and in protein content (12,25%, $p<0,05$). The fat and the protein contents variations are close correlated with THI, between them being a reverse proportional relation. The number of the somatic cells in milk is growing in cows exposed to caloric solar radiation, recording an increasing of 42.96% in August compared to May. The increased number of somatic cells is directly correlated with THI.
Key words: dairy cows, solar radiation, milk quantity and quality

STUDY CONCERNING THE VARIATION OF THE MAIN QUALITATIVE AND QUANTITATIVE TRAITS OF THE MILK COLLECTED FROM DIFFERENT ROUTS LOCATED IN THE COUNTY OF CLUJ

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The milk is an essential feed containing in an equilibrate proportion majority of nutritional substances needed by organism. European legislation requires each Member State to respect the norms according the milk delivering by the farmers as raw material, which have to be processed coresponding to the quality norms. It must accomplish several quality criteria, as: fat and protein percent, low TGN and SCC content.

Key word : milk,quantity, qualitaty, routes

THE COMPARATIVE STUDIES OF QUALITY OF CARCASS AND MEAT OF COMMERCIAL HYBRIDS OF PIGS

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In the paper are presented the results of a comparative research of meat and carcass quality at the hybrids obtained by using final boars specialized in meat production. A difference was established concerning the hybrid's productive capacity as well as the efficiency of using the genetic types of boars for quality production of carcass and competitive meat.
Key words: breed, boars, hybrids, meat, gain

CONTRIBUTIONS TO KNOWLEDGE OF SOME MORPHOLOGICAL FEATURES IN YOUNG SOWS BRED IN FARMSTEADS ON CLUJ COUNTY INCIDENCE

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The present study tries to offer some information concerning the morphological state of Bazna Breed female suina biological material bred and kept in farmsteads on Cluj County incidence, near to enter to reproduce for the first time.
Practically, after a biometric synthetic check, 37 young sows were phenotypically analyzed, considered as acceptable to reproduction by the breeders.
The obtained results were statistically processed and the formulated conclusions want to be modest recommendations for suina breeders in general, and for Bazna breed in special.
Key words: suina Bazna breed, phenotypic and biometric analysis, reproduction

GENETIC DETERMISM OF THE GROWING CHARACTERS AND THE CARCASS QUALITY OF A PIG POPULATION

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Studying the genetic parameters presents importance for choosing selection method, breeding sistem and the goal objective of selection. The study was carried on a sample from a pig population named LS 345-Periş, consist of 2759 offspring belonging to 80 of sire families. It can be notice that the growing and body empty traits have a genetic determinism intermediate towards intense. The heritability values range from 0.264 (backfat thickness) to 0.411 (percentage of muscle tisue).

Key words:genetic parameters, heritability,genotypic correlation.

DYNAMICS OF COSTS, INCOMES AND PROFIT IN ROMANIAN PORK

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High prices in piglets from performing lines, as well as the high profit resulted from commercialising piglets (27%) can be justified by the very low offer compared to the demand. In Romania, piglets from performing synthetic lines are being produced only on meat hog industrial complexes, units that have low numbers of piglets available for sale. The low profit of economic actors (carcass marketers, secondary processors, marketers of cut and packed pork) is justified by the fact that in general these kinds of activities are performed at least two by the same economic actor, thus resulting in a larger profit for both activities. An economic actor that markets hog carcasses also does the cutting and packing of a certain amount of pork he/she has purchased. These economic actors are usually pork suppliers for hyper- and super-markets. There are also pork economic actors that perform only one kind of activity, such as butcheries, where the only activity is cutting and retail marketing of pork, but this kind of activity is low and in permanent competition with that of super-markets. These economic actors are small pork production units, similar to family farms.

Key words: pork, dynamics, costs, incomes, and profit

SYNTHETIC VALUES OF REPRODUCTION INDICES IN SOWS DEPENDING ON SEASON

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Calving season influences reproduction indices recorded later, i.e. more sows that calved in the fall reached oestrus, were inseminated and calved again the largest number of piglets with the best viability. The lowest reproduction indices were in sows in oestrus during lactation or after weaning the piglets in summer or in winter, when outside temperatures reach extreme values and, therefore, it is even more difficult to get even temperatures in animal sheds.

Key words: sows, reproduction indices, season

IMPACT FACTORS IN THE REGULATION OFFEED CONSUMPTION IN PIGS EXPLOITED SEMI-INTENSIVELY

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Pigs, as well as other monogastric species, regulate most of their consumption when feed is supplied in abundance, depending on the necessary energy. With the increase of feed energetic concentration, consumption diminishes when metabolisable energy oscillates only a little. Feed consumption is only a little influenced by feed protein content, as when protein lacks, pigs tend to consume larger amounts of feed to cover the necessary amino acids, and when protein is in excess, there is a slight diminution of feed consumption, which does not influence growth process. When environmental temperature increases, feed consumption diminishes linearly up to the thermal neutrality area, doubled by a diminution of the ingested energy, despite the decrease of the necessary energy level. At low temperatures (below 15^0C when kept together), feed consumption increases the lower the temperature.

Key words: swine, feed consumption, semi-intensive system, influence factors

THE PRODUCTION PERFORMANCES AT S.C. NORALY AGROSERV S.R.L FARM FROM CLUJ COUNTY

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The researches conducted for the present paper are integrated into the PhD activity with the title: "Researches regarding the morpho-productive characters of cattle in the context of some constructive solutions from Transylvanian farms", that follows the dairy cow's morpho-productive performance in S.C Noraly Agroserv S.R.L farm from Viisoara village. At S.C Noraly Agroserv S.R.L farm with 76 Romanian Spotted dairy cow breed infused with Red Holstein and the young stock, we followed: the biological material component, keeping the breeding technologies, material and forage basis and the production obtained. As a result of the analyses that were made we came to the conclusion that reaching the productive performances of E.U. norms imposes: mechanical waste disposal inside the existing shelter, ventilation problem to be resolved, all these followed by the economical efficiency increase.
Key words*: production, farm, cattle*

STUDY REGARDING THE INFLUENCE OF SEASON AND LACTATION ORDER ON MILK YIELD, MAJOR COMPONENTS AND SOMATIC CELL COUNT OF MILK

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The effects of lactation order and season on the milk production, chemical composition and somatic cell number during a normal lactation (305 days) were studied. Researches were carried out on Romanian Black and White cows from the Didactical Station Timişoara. Cows calved in autumn and finished their lactation by the end of the next year. Milk production increased progressively in the second and third lactation, thus fat, protein and lactose yields increased, too. During the warm season (April-September) higher values for milk yield and major components of milk were recorded compared to cold season. As a quality indicator, somatic cell count increase with lactation order, but reduces to half in cold season compared to warm season.

Key words: milk, somatic cell count, major chemical components.

STUDY REGARDING THE INFLUENCE OF SEASON ON THE HYGIENIC QUALITIES AND MAJOR COMPONENTS OF THE MILK

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This study approaches the influence of the season on the total germs count (TGC) and chemical composition of the milk in Brown cows from Mureşul farm, Arad County. Results showed a very close variation for the major components of the milk. Milk fat and lactose were slightly higher in cold than in warm season, while milk protein had relatively constant values. Total milk acidity, as freshness indicator, had values within normal limits (15-19°T), with significant differences ($p<0.05$) between the two seasons. The hygienic quality of the milk, assessed through TGC, improved during the studied period, differences between the season being significant ($p<0.05$).
***Key words**: milk, total germs count, major chemical components, acidity.*

RESEARCH REGARDING THE SOMATIC CELL COUNT AND THE MILK PRODUCTION FOR THE BLACK-SPOTTED COWS

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Researches demonstrate once again that the most accepted criteria for indicating the udder health state in a dairy cow farm are the somatic cell count and the quality milk production. Milk with a somatic cells count about 200,000 cells/ml on average, fulfills all conditions regarding the allowance of the quality financial bonuses (by processors). By milking 3 times a day during summer and for a short period of time has as consequence the increase of the marketable milk output with 7.42% (from the 2nd day with 5.67% up to 10.7-13.29%), but also an improvement of the milk's chemical composition (% fat, % protein), clear superior to those registered in the same period of the precedent year.
Key words: qualitative and quantitative milk production, somatic cells count.

RESEARCHES ON CHEMICAL COMPOSITION AND SOMATIC CELL COUNT IN RAW COW MILK

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The aim of the paper was to characterize the raw milk collected in the Western part of Romania by a milk processing company, both chemically and hygienically. Researches were carried out on 3988 milk samples collected from a several collecting points and dairy farms from Timiş, Arad and Caraş-Severin counties. Monthly, two samples were collected at least from each farm or collecting point. Chemical composition and somatic cell count (SCC) were determined on each sample. In Timiş and Arad counties the milk was significantly lower in total solids than in Caraş-Severin County (12.6% vs. 13.2%), but somatic cell count was higher, exceeding the higher limits admitted by the norms. Season had a significant influence on both chemical composition and SCC. While the total solids content of the milk was lower during the summer and autumn the SCC was higher in the same seasons. Chemical composition gets better from year to year, except for the milk fat percentage that was similar throughout the study period. It was concluded that there a major influences of county, season and year of collection on the chemical composition and SCC, with direct influences of the breed structure and type of the farm that produces the milk.

Key words: raw cow milk, chemical composition, somatic cell count.

I

RESEARCHES REGARDING THE INFLUENCE OF DAYS OPEN AND DAYS DRY ON THE MILK PRODUCTION IN FIRST CALVING ROMANIAN SPOTTED COWS

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The purpose of the paper was to study the influence of the length of days open and days dry on the milk yield, as well as to establish correction coefficients to standardize the lactations of the Romanian Spotted primiparous cows according to these factors. Researches were carried out on 667 lactations from Romanian Spotted primiparous cows. Lactations were assigned to one of the eight classes of days open: 20-40, 41-60, 61-80, 81-100, 101-120, 121-140, 141-160, and over 160 days. For days dry seven classes were formed: 0-20, 21-40, 41-60, 61-80, 81-100, 101-120, and over 120 days. The highest current production was obtained when cows were open between 101 and 120 days (3476.1 kg milk). Correction coefficients were higher for shorter days open, starting with 1.14 when days open were between 20 and 40 days, and they were lower for days open length close to 101-120 days interval (1.01 for 121-140 days open). Milk yield per normal lactation increased from 2960.4 kg when previous days dry was low (0-20 days dry) to the highest production of 3919.2 kg for days dry interval between 61 and 80 days. The standardization coefficients for days dry were higher for lower classes, starting with 1.32 in 0-20 days dry class and decreasing down to 1.04 for the class of 81-100 days dry. Both for days open and days dry, the milk yield was lower when these periods were shorter than in the case these periods were longer, suggesting that milk production data should be adjusted at least for short periods of these reproduction indices.

Key words: days open, days dry, milk yield, Romanian Spotted, primiparous cows.

A STUDY ON THE GROWING OF ROMANIAN BLACK SPOTTED COWS IN SOME PRIVATE EXPLOITATIONS FROM COUNTY BOTOŞANI

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The Romanian black spotted cows – a breed specialized in the milk production – represents the main supplier of milk in the country.
The study was made to highlight the productive level and the power of hereditary transmission of the main features thus offering data useful for the elaboration and application of the melioration programme for this breed in county Botoşani.
Key words: Romanian Black Spotted cows, exploitations,

DAILY GAIN IN PREPUBERTAL DAIRY HEIFERS AND ITS EFFECT ON BODY SIZE AT FIRST CALVING, METABOLIC PROFILE AND FIRST LACTATION MILK PRODUCTION

GAVAN C.

S.C.D.A. Simnic-Craiova

The aim of this trial was to evaluate the effect of moderate (660 g/d) and high (880 g/d) before puberty on body size, metabolic profile and first lactation milk production of Holstein - Friesian heifers. There were 18 heifers raised on four period feeding regimen. Half the heifers were artificially inseminated at 370 kg, and the other half after 420 kg of body weight to obtain early age at first calving and late age at first calving respectively. Age at first calving significantly influenced milk production. Late calving heifers had higher milk production and a lower fat milk procentage than early calving heifers.

Key words: dairy heifer, growth, first lactation

CONTRIBUTIONS TO THE KNOWLEDGE OF SOME ASPECTS REGARDING THE DRINKING BEHAVIOUR IN MULTIPAROUS ROMANIAN BLACK AND WHITE COWS

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The aim of this study was to determine some aspects of drinking behaviour in the cold-season. The study was carried out on 10 multiparous cows, housed in a tied stanchion barn 24 hours per day. During the experiments the following behaviour aspects were monitored: the number of drinking periods per 24 hours and drinking frequency. When cows were fed twice a day the average number of drinking periods was 11, and when cows were fed tree times per day, the average number of drinking periods per cow was 12.2 per day. The highest frequency of drinking period in the first part of the experiment (one with two meals per day) was registered at 10:00 and 18:00-19:00 h. When the forages were administrated in three meals three peaks were registered, between 09:00, 15:00 and 20:00 h. During the night time, consumption of water was very low.

Key words: Romanian Black and White, multiparous cows, drinking behaviour.

THE PHENOTYPICAL CORRELATIONS BETWEEN SOMATIC CELL COUNT AND PRINCIPALS CHARACTERS OF COW MILK PRODUCTION

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Researches were making on cow milk samples from Dornelor area. Studied characters were mill production, fat percent, protein percent, and somatic cell count. There were analyzed the milk samples with SOMACOUNT to "Dorna Lactate" and dates have been discussed with MATLAB program. The phenotypical correlation values have been varied between +0,207 ÷ +0,710 for fat percent and protein percent; -0,327 ÷ +0,233 for fat percent and somatic cell count, -0,345 ÷ +0,046 for protein percent and somatic cell count; -0,676 ÷ +0,292 for milk production and fat percent; -0,422 ÷ +0,355 for milk production and protein percent and 0,418 ÷ +0,500 for milk production and somatic cell count.
Key words: milk cow, phenotypical correlation, fat content, protein content, somatic cell count.

OBSERVATIONS REGARDING THE ASPECT OF VAGINAL MUCUS IN COWS, IN DIFFERENT STAGES OF THE SEXUAL CYCLE

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To succeed in cow reproduction activity it is necessary to have knowledge about the particularities of the reproduction functions at this species, the succession of the physiological processes which lead to a more precise appreciation of the optimal insemination moment of the cow after parturition, the normal evolution of gestation, parturition and puerperal period. Vaginal mucus in cows has the capacity to crystallize, and the ovulation moment is recognized by the quality and intensity of the fern aspect. In the ovulation moment the value of crystallization is maximal decreasing in the following phases of the sexual cycle, until it complete disappear in the advanced lutheal phase. There were made smears from vaginal mucus, which after microscope examination have been photographed. In the estrus phase the vaginal mucus crystallized with characteristic fern aspects, which disappear in vaginal mucus harvested during the metestrus, diestrus and gestation.
Key words: vaginal mucus, cow, sexual cycle.

RESEARCHES ON THE ELECTRICAL RESISTANCE OF CERVICAL MUCUS IN COWS

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To succeed in artificial insemination and to produce the fecundation in cows it is necessary to have knowledge about optimal time of ovulation. Such possibility appears using the values of electrical resistance of cervical mucus. The smallest values are obtained during the ovulation due to the pH modification influenced by the estrogens. The purpose of the paper was to determine the electrical resistance of the cervical mucus in cows with clinical signs of estrus, depending on females' age. Also, the electrical resistance of the cervical mucus in cows in different physiological stages (pregnant, no pregnant) was measured. The ovulation detector DRAMINSKI was used. This equipment allows to obtained a quickly and precise rapport on the physiological stage of the cow. It can be detected the cow with atypical ovulation, irregular ovulation. This method improve the insemination efficiency, allows detecting early gestation period or the moment of ovulation. All these have a positive influence on the development strategy of the farm and improve the economic performances.

Key words: electrical resistance, cervical mucus, cow.

PHENOTYPIC PARAMETERS OF MILK PRODUCTION IN ROMANIAN SPOTTED BREED PRIMIPAROUS FROM RESEARCH STATION AND AGRICULTURE DEVELOPMENT LOVRIN –TIMIŞ COUNTY

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Milk is considered the most complete natural food, being the only one source of food for all mammals' newborn. It is very rich in lactose, proteins and fats. Milk contains all the 20 essential amino acids, ten fat acids, 25 vitamins and 45 minerals. In a herd of 117 Romanian Spotted breed primiparous cows, from Research Station and Agriculture Development Lovrin –Timis County, the average milk production in 2006 was of 4083.846 ± 94.06 liters with the lowest value 1737 liters and the highest 6582 liters. The milk fat production obtained per cow was 165.108±3.54 kg, while milk protein production was 134.144±3.006 kg. Results obtained confirm that in this farm there are heifers that can become dairy cows with a high and of quality milk production.
Key words: dairy cattle, milk, fat, protein, production

GENOTYPIC PARAMETERS OF MILK PRODUCTION IN PRIMIPAROUS DAIRY ROMANIAN SPOTTED BREED FROM RESEARCH STATION AND AGRICULTURE DEVELOPMENT LOVRIN –TIMIŞ COUNTY

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In a herd of 117 Romanian Spotted breed primiparous cows, from the Research Station and Agriculture Development Lovrin –Timiş County, the heritability and phenotypic correlations for milk production, milk fat yield and milk protein yield were estimated. For milk fat and milk protein yield, the heritability was 0.75 and 0.88 respectively, which means that these characters can be selected together. For milk production the heritability value was only 0.31. A positive and very high correlation was registered between milk production and milk fat production, +0.97. Between milk production and milk protein production the correlation was also high and positive +0.83, with a very close value of the correlation between milk fat production and milk protein production, +0.86.

Key words: milk, milk fat, milk protein, correlation, heritability.

FIRST CALVING AGE EFFECT ON MILK PRODUCTION OF FRIESIAN – ROMANIAN BLACK SPOTTED COW BREED IN TRANSYLVANIAN FARMS

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Obtaining higher quantitative productions, of superior quality and in maximum economical conditions, is determined by the high biologic material's characteristics and parameters. Researches carried out on a 294 heads of primiparous cows population, establish the first calving age effect on the phenotypic characteristics of the milk production in the first lactation and its economical implications in the improvement process of the Friesian – Black Spotted cow population, raised in conditions of private farms from 3 counties from Transylvania: Bihor, Cluj, and Mureş. The obtained results demonstrate the fact that the studied primiparous cows had a first calving age that exceeds with 35-42% the average values expected and predicted for this breed. The population was studied and structured on 5 age groups, presenting significant differences regarding the milk production obtained in the first and the following age groups. Starting with the 850-950 days group, the milk production had values near the average production of the primiparous cows, realized at the farm level. This indicates a prolongation of the investment period with unjustified economical and financial implications. The first calving age values can be reduced by adopting adequate technical and organizational procedures and by giving the right importance to the replacement heifers.
Key words: first calving age, quantitative milk production, primiparous cows.

MILK PRODUCTION GENETIC IMPROVEMENT PROGRAM OF THE TRANSYLVANIAN PINZGAU BREED IN THE BIHOR, HUNEDOARA AND SUCEAVA COUNTIES

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Starting from the average values of productive performances gained by the active cows in the Bihor, Hunedoara and Suceava counties, there has been established a genetic improvement program for the milk production of Transylvanian Pinzgau breed in the three counties. The morpho-productive parameters followed in the making of the projected type of Transylvanian Pinzgau breed were: body weight 600 kg, height at withers 135 cm, milk production 4500 kg, 3.9% fat, fat yield 175.5 kg, 3.5% protein, protein yield 157.5 kg, average daily gain 1000 g, live weight at 500 days of age 500 kg, killing out percentage 58%. To realize a production of 4500 kg of milk, starting from the active actual production, in the Bihor County will be required 3.42 generations, in the Hunedoara County 1.4 generations and in Suceava 1.56 generations. For realizing the selection objective of 175.5 kg fat from milk, in Bihor County will be required 2.03 generations, in Hunedoara 0.95 generations and in Suceava 0.89 generations. The projected type of Transylvanian Pinzgau breed doesn't have to impair the rustic element, the resistance, the longevity and the ability of movement through which this breed gained a specific exploitation habitat in an area in which it is irreplaceable. The projected type of Transylvanian Pinzgau breed can adapt to the mountain habitat and can represent one of the essential factors for the long term development of mountain agriculture and agro-tourism, in the condition that it will be sustained financially, imperative for the whole Romanian mountain area.

Key words: Transylvanian Pinzgau, milk production, genetic improvement program.

DEVELOPMENT WITH THE CATLE OF THE PASTURE LANDS IN THE MOUNTAIN AND HILL AREA

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The fact that about 60% of the pastoral background of the country is situated in the mountain and sub-mountain area pleads for the real chances of revaluating the bio-vegetal fodder by the ruminants in order to obtain products with high biological value. The technology ***Beef Cow*** *represents raising and exploiting cows exclusively for the meat production. At ICDM Cristian-Sibiu there was made up an experimental group of eight cows from Romanian Spotted and Brown breeds with specific characteristics for the beef production, which have been exploited in the system of free stabling, applying strictly the* ***Beef Cow*** *technology. This paper represents a present solution and an offer of the research team from ICDM, for the agricultural exploitations in the mountain and sub-mountain areas, where the exploitation of the dairy cows is in a risk area.*
Key words: cows, beef cow, pastoral background.

RESEARCHES ON POSTPARTUM FEEDING AND ELIMINATION BEHAVIOR OF THE DAM-CALF COUPLE

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The aim of this paper was to measure the main aspects that characterize the feeding and elimination behavior of the dam-calf couple during the first week after calving. The experiments were carried out in winter on 5 dam-calf couples. During the experiments the following feeding and elimination behavior aspects were determined: number of feeding periods, the length of feeding periods, number of ruminating periods, the length of ruminating periods, the number of drinking periods, number of defecations and urinations. Data was computed by ANOVA/MANOVA. Results showed that the mother cows spent daily in average on a day 256.5 minutes for feeding and 306.8 minutes for ruminating. The cows drank water 7.7 times per day. The calves suckled on average 4.4 times daily and the length of a suckling period was 11.9 minutes. Mother cows defecated in average 6.4 times daily and urinated on average 3 times a day.
Key words: *feeding behavior, elimination behavior, mother cows, newly born calf, Romanian Black and White Cows.*

CONTRIBUTION TO THE KNOWLEDGE OF THE RESTING BEHAVIOR OF DAMS AND NEWBORN CALVES

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The aim of this paper was to measure the main aspects that characterized the resting behavior of the dam-calf couple in the first week after calving. The experiments were carried out in winter on 5 dam-calf couples. During the experiments, the following resting behavior aspects were determined: number of periods standing up, number of periods lying down, the length of the periods. Data was computed by ANOVA/MANOVA. Results showed that the mother cows spent on average 761 minutes standing up, respectively 54% from a day length, and 633 minutes lying down, respectively 46% from a day time. The calves spent on average 224 minutes standing up during 12.7 periods, respectively 16% from a day length and 1216 minutes lying down.

Key words: resting behavior, mother cows, newly born calf, Romanian Black and White Cows.

EXPERIMENTALLY-DERIVED FORMULA FOR COMPUTING SERUM OSMOLARITY IN CHICKENS

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Osmolarity is a colligative property of solutions that depends on the number of dissolved particles. The three types of solutes most encountered in biological fluids are electrolytes, organic non-electrolyte molecules and colloids. The osmolarity of the extracellular fluid is about equal to that of the intracellular fluid, although there are significant differences in the ionic composition of the two compartments. Plasma osmolarity is a convenient and accurate guide to intracellular osmolarity. There are several different formulas for the calculation of human serum osmolarity. The goal of this study is to estimate the plasma osmolarity in chickens from the concentrations of the main electrolytes and the glucose and urea content, and to establish the contribution of each osmotic component. Linear regression analysis was carried out to determine the best predictors of serum osmolarity in chickens. Two equations were also deduced for calculating serum osmolarity using manual regression analysis.

***Key words**: osmolarity, osmotic coefficient, chicken, linear regression analysis*

STUDY REGARDING THE OPERATING SPEED OF FORAGE HARVESTING MACHINERY IN ORDER TO OPTIMIZE THE WORKING CAPACITY AND FUEL CONSUME

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The efficiency of forage production machinery system is partially reflected in some classical economical indices, because the real efficiency of mechanical tillage utilization at forage harvesting and preparation must be reflected in the forage quality increasing and feed superior valorization by the farm livestock. An area of 7.8 alfalfa ha was harvested with U-650M tractor and ROTO 165 rotary mower and with U-650M tractor and Zakaz rotary mower at different speeds in field work. Average values of the speed in parcel work, work effective capacity, work capacity during shift, specific work capacity on cutter width, fuel consume per land unit, and specific fuel consume per mass unit were determined for each speed in field work. Power matching between the tractor and the mower do not always meet the requirements when forming harvesting mechanized systems. Classical mowers with common cutting units do not sufficiently load the U-650M tractor existing in many Romanian farms, which determines an unfavorable functioning regime of the tractor engine correlated with increased fuel consumes.
Keywords: forage mechanized harvesting, work capacity, fuel consume.

THE STUDY OF THE INCIDENCE OF THE MAIN DIGESTIVE ENDOPARASITOSIS AND INTESTINAL MICROFLORA IN BUFFALOES REARED IN ORGANIC FARM

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The research was performed in April, May and July 2005 on 105 buffaloes aged between 3 – 10 years within different physiological status (lactation, digestion, mammary repaos) reared in organic system. Coprological samples were individually harvested from 33 animals. The coprologic examination of these samples was performed and incidence and intensity of some digestive parasitosis (eimeriosis, dicroceliosis, fasciolosis, trichostrongilidosis) were recorded.In the mean time, microbiological analyzes were performed on the same samples. The total germ number (TGN), coliphorm bacteria and fungi were determined. The incidence of the main studied digestive endoparasitosis recorded significant variations function of the harvestiong time. The eimeriosis had the maximum incidence in May (45.40%) and minimum in July (18.10%). The others had maximum values in April (fasciolosis 36.30%, dicroceliosis 27.20%, trichostrongilidosis 45.50%) and minimum in July (fasciolosis 9.90%, dicroceliosis 18.10%, trichostrongilidosis 9.90%). The value of the intensity of the parasitism in these endoparasitosis are different: a maximum of copropelimination of oocystis was recorded in April for in eimeriosis (90 EPG – eggs/g faeces) and minimum in July (50 EPG); in fasciolosis the values are 30 EPG in April and 10 EPG in July; in dicroceliosis they decrease to 50 EPG in April up to disparition in July and in trichostrongilidosis a maximum of 70 EP was recorded in April and minimum in May – July (40 EPG). The level of intestinal microflora charge in prelevated coprological samples recoprded differences function of microbial specie and harvesting month. The minimum values were recorded in July (TGN, sample no. 4 16 x 10^{-12}, coliphorms sample no. 10, 1 x 10^{-7}; fungi, sample no. 10, 2 x 10^{-7}) and the maximum in April (TGN, sample no. 10 744 x 10^{-12}, coliphorms sample no. 5, 126 x 10^{-7}; fungi, sample no. 121 x 10^{-7}).

Key words: buffaloes, coprologic samples,fasciolosis, coliphorm bacteria, fungi

STUDY REGARDING *HELIX ASPERSA* SNAIL WINTERTIME PROTECTION IN OPEN AIR REARING TECHNOLOGY

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In Italy the standard wintertime protecting solution used for brown garden snail (Helix aspersa aspersa) inside open air rearing technology is to cut the plants to 20 cm and to protect the rearing pen with agryl-sheet, named in italian language Tessuto-NonTessuto or for short TNT. But this method isn`t suited for our country colder winters. Low temperatures registered during 2005 - 2006 winter and hibernation behaviour inadequate understanding led to high mortality rates, estimated to over 85%, in most of the outdoor snail farms all around Romania.

In order to solve the problem we studied some aspects of brown garden snail ecologic plasticity, his hibernation behavior inside outdoor snail farms and researched the possibilities of implementing some alternative wintertime protective methods. As a result we developed the "sandwich" system based on straw non-conducting properties conceived in such a manner to provide an efficient adiabatic protection while the inside aeration is enough to limit as much as possible the straw mass moistening.

Keywords: brown garden snail, hibernation, sandwich system, outdoor snailfarm, straw

BUSINESS TRAVEL IN THE COUNTY OF TIMIŞ (ROMÂNIA)

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Business travel in the County of Timiş has recorded an increase in the year 2006 compared to the year 2005 for the same period. There have been 4097 more arrivals in the main tourist accommodation structures, and 4961 more stays over night compared to September 2005. Despite all this, the average duration of the sojourn was only 2.9 days compared to 2.6 days during the same period of time. We can see that the longest duration of the sojourn was in the people lodged in tourist villas (7.9-11.9 days), as a result of surveillance activities, of the implementation of new technologies and of professional training by multinational companies that operate in the County of Timiş.

Key words: business travel, total number of arrivals, number of stays over night, duration of sojourn, County of Timiş