

Lucrări științifice
Seria Zootehnie
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THE GENE THEORY OF SEXUALITY OF GALINACEAE

F. PRICOP

The genetic determinism of sex and the constant ratio males : females equal to one in genetic recombination of Galinaceae was explained in literature on the chromosomal level by the existence of the male sex, homogametic ZZ, and of the female sex, heterogametic ZW, as well as by the existence of genes within the chromosome Z and by the absence of genes within the chromosome W. In this paper we present the experimental results of direct and reciprocal genetic recombination. The experimental design allows the identification of the dominant sex gene linked to the gene that determines the plumage color in the first generation. Both these genes are located within the chromosome W. In the same generation the recessive sex gene was identified within the chromosome Z. The second generation was obtained by cross of the males and females of the first generation. In each category of genotypes of the second generation males and females are displayed equally. Three categories of genotypes were produced, namely dominant homozygous, heterozygous and recessive homozygous. The experimental results demonstrate that within the chromosome W both the dominant sex gene and the gene transmitting the plumage color are located. Our experimental results are not in accordance with the hemizygotic theory. The identification of the dominant sex gene in the chromosome W and of its recessive allele located in chromosome Z leads to a new theory, named by us "The Gene Theory of Sexuality of Galinaceae", which is in contradiction with the chromosomal mechanism of Morgan.

**IMMUNOSEROLOGICAL METHODS FOR DETECTING THE BLOOD
GROUP FACTORS IN SHEEP**

Gh. HRINCĂ, M. GROZA, Elena FECIORU, I. CHIORESCU

The methodological principle which lies at the basis of the blood group determination is the immunoserological reaction between antigens and antibodies. In sheep two methods can be applied to identify the blood group factors: haemolysis and haemagglutination; in both methods the antigens are represented by erythrocytes and the antibodies by isoimmune or heteroimmune reagents; in the haemolysis reaction the rabbit complement is necessary too. The haemolysis is the most frequent method to detect the erythrocyte factors, being used in the blood group systems A, B, C, M, R-O and X-Z. The haemagglutination technique is specific only to the system D.

**ASPECTS OF THE ENDOCRINO-METABOLIC ADAPTATION, RELATED
TO THE BOVINE MEAT YIELD**

**P.C. BOIȘTEANU, Iolanda MĂRGĂRINT,
Cristina G. RADU-RUSU, Roxana LAZĂR**

The paper presents a synthesis of the peculiarities concerning the endocrine-metabolic adaptations of the bovine organism to the qualitative and quantitative meat yield (muscular mass accumulation and fattening degree). The essential metabolic aspects, the muscular and adipose tissue characteristics were analyzed, as related to bovine nutrition and digestion specific.

USE MOLECULAR MARKERS FOR REVEALING APPLE F1 HYBRIDS MONOGENIC RESISTANCE TO SCAB (*VENTURIA INAEQUALIS*)

Monica BODEA, D. PAMFIL, R. SESTRĂȘ, Bianca PĂTRĂȘCU, Ioana PETRICELE, Rodica POP, Iulia Francesca POP

Early selection of scab resistant apple hybrids can be enhanced by the use of specific molecular markers tightly linked to the V_f resistance gene.

The aim of our study was to analyse four apple cultivars (Liberty, Florina, Starkrimson, Golden Spur) used as genitors and their hybrid seedlings for revealing monogenic resistance to scab.

In the experimental field, seedlings selection was done after presence or absence of the scab infection symptoms in leaves and phenotypically selection was completed by marker assisted selection.

*In this study we used two specific molecular markers AL-07 (SCAR) and AM-19 (SCAR) who detects the presence of the V_f gene introgressed from *Malus floribunda* 821 in two of parental cultivars. Starkrimson and Golden Spur were susceptible scab parents with genotype $vfvf$ (recessive homozygous), while Liberty and Florina were identified as heterozygous scab resistant parents with genotype $VfVf$.*

We analysed 40 apple seedlings, grouped in four combinations after their genitors (in each combinations were selected ten hybrids, among them five resistant and five susceptible to scab attack. Hybrids belonging to Starkrimson x Golden Spur were only recessive homozygous genotype ($vfvf$) and in combination Liberty x Florina were identified susceptible and resistant progenies only with heterozygous genotype ($Vfvf$) and no one with dominant homozygous genotype ($VfVf$).

ASPECTS CONCERNING THE CORRESPONDENCE BETWEEN CONCRETE MARC – CONCRETE CLASS-NEW CONCRETE CLASS. NEW CEMENT BASED PRODUCTS FOR CONSTRUCTIONS (PORIMENT[®]L)

C. LEONTE, Doina LEONTE

Concrete- homogeny mixture obtained with binder, unit (sand, rock, etc.) and water. To comply with the project, it can be used additives.

The designer as has the oblige to mention in the project the cement type to be used in the concrete composition to comply with the standard SR EN 197-1:2002 witch represents the European standard.

The unit must have an adequate granulation curve, do not contain foreign bodies and substances.

The water for concrete must be potable.

Additives are chemical substances which improves and modifies the concrete. The proportion of additives in concrete must be below 5%.

MORPHOLOGICAL ASPECTS OF SOME ORGANS IN THE LOCOMOTORS APPARATUS OF THE BROWN BREED YOUNG LIVESTOCK

V. TEUȘAN, Anca TEUȘAN, R.M. RADU-RUSU

*Four groups of eight animals each, belonging to *Bos taurus* species, Brown breed, male gender, six months old, were used in our researches. The feeding was different for each group, using variable ratios of alfalfa hay, corn silage and concentrates. The energy concentration of the fees varied between 0.751-0.849 UFC/kg DM, and the energy:protein ratio was situated between*

99.23 g PDIE/UFC-117.17g PDIE/UFC. Three individuals were slaughtered from each lot, at the end of the experiments, proceeding then to some quantitative assessments on the carcasses (weights of the carcass, bones and muscle masses, meat:bones ratio, slaughtering efficiency), as good as to necropsy and individualisation (weighting and measuring) of some muscles and bones in the locomotor apparatus.

The results shown several differences between studied groups, concerning live weights of the animals or the weights of the carcasses, of various bones and muscles. Those differences were found to be not statistically significant, except for a single difference, observed in ilio-spinalis muscle (*Longissimus dorsi*).

RESEARCHES CONCERNING THE THICKNESS, THE DENSITY AND THE SHAPE OF THE MUSCULAR FIBRES FROM THE ILIO-SPINALIS MUSCLES OF THE BROWN LIVESTOCK YOUNG MALES

V. TEUȘAN, R.M. RADU-RUSU, Anca TEUȘAN

The biological material used in our studies (histological samples) issued from 4 youth cattle groups – male gender, belonging to Brown breed, 18 months old with live weights of 377-413kg. Samples from the Ilio-spinalis (*Longissimus dorsi*) (L.D.) muscle, 8th-9th ribs level, were taken when the 12 animals (3×4) were slaughtered. The samples were processed through paraffin sectioning technique, issuing 30 histological smears, which were studied using the MC₃ binocular photonic microscope. The small and the large diameters of the muscular fibres were measured on cross sections, within the microscopic field. The average diameter, the miocyte shape and density were obtained through counting and computations. Thus, within the L.D. muscle, the muscular fibres had a cylindrical shape (DM/Dm ratio=1.37-1.47/1), the large diameter between 48.98-52.86μ, the small diameter between 34.35-37.50μ and the average diameter of 41.60-44.81μ. The density of the miocytes varied between 426.9-180.88 m.f./mm² of muscular tissue.

COMPARATIVE RESEARCHES CONCERNING SOME HISTOMETRIC FEATURES OF THE MIOCYTES IN SOMATIC MUSCULATURE OF THE DOMESTIC CHICKEN AND WATERFOWL (II). WING AND THIGH MUSCLES

R.M. RADU-RUSU, V. TEUȘAN, I. VACARU-OPRIȘ

The paper presents the results issued from some histometric researches, applied on adult individuals belonging to the *Gallus domesticus* L. and *Anser anser* L. species. Within the microscopic field, the large (DM) and the small diameters (dm) of the myocytes in the *Biceps brachialis* (BB) and *Biceps femoris* (BF) muscles of both species were measured. The average diameter and the report between the small and the large diameters, the cross-section area of the myocytes were calculated. The data were proportionally and statistically analyzed, the differences being found as very significant for the large and average diameters and distinguished significant for DM/dm ratio and for cross section area of the myocytes within the *Biceps brachialis* muscles. The differences found for the other studied muscular category (BF), were not significant (DM/dm ratio) or very significant (for others histometric indexes).

Par consequence, it could be stated that the fibers from the *Biceps femoris* muscles of the *Anser anser* L. species were thinner than those measured in the *Gallus domesticus* L. species., while for the wing muscles (BB), the situation was reversed.

COMPARATIVE RESEARCHES CONCERNING SOME HISTOMETRIC FEATURES OF THE MYOCYTES IN SOMATIC MUSCULATURE OF THE DOMESTIC CHICKEN AND WATERFOWL (I). PECTORAL MUSCLES

R.M. RADU-RUSU, V. TEUȘAN, Anca TEUȘAN

The paper presents the results issued from some histometric researches, applied on adult individuals belonging to the Gallus domesticus L. and Anser anser L. species. Within the microscopic field, the large (DM) and the small (dm) diameters of the myocytes in the superficial pectoral muscles of both studied species were measured. The average diameter and the report between the small and the large diameters, the cross-section area of the myocytes were calculated. The data were proportionally and statistically compared, resulting some differences found as non significant (dm, DM/dm), distinguished significant (average diameter and cross-section area), or even very significant (DM).

The main conclusion of the researches affirms that the muscular fibers in the pectoral muscles of the Anser anser L. species are thicker and with a higher cross-section surface than those measured in the Gallus domesticus L. pectoral muscles.

THE VEGETATION INTERRUPTION FOR THE SEED POTATO IN ACCORDANCE WITH THE MAXIMAL FLIGHT OF THE APHIDS AND THE SEED FRACTION ACCUMULATION

Ioana PETRICELE, D. PAMFIL, Daniela DONESCU, Gh. OLTEANU, Maria IANOȘI, K. KOVÁCS

Considering that producing a planting material with high phytosanitary valence takes a lot of effort, after two years of researches that took place in the experimental field from Brasov, tubers with a minimum of virotic infections and corresponding yield have been obtained. This was based upon estimating the optimal period for the vegetation interruption, considering the maximal flight of the aphids and obtaining the highest percent of seed tubers, correlated with the sum of thermic degrees during the vegetation period, as two principal criteria which had to be met.

Until now, the moment of vegetation interruption of the seed potato cultures was established taking into account the maximal flight of the aphids; in our case, for the semi-early potato varieties (e.g. Ostará), the second evaluation criteria for the vegetation interruption, based upon obtaining the highest percent of seed tubers, was used. For the medium late Desireé potato variety and the late Eba variety, the criteria used to estimate the optimal moment for the vegetation interruption was the maximal flight of the aphids, which took place before obtaining a satisfactory quantity of seed tubers (30-55 mm).

RESEARCH CONCERNING THE USE OF CHEMOTHERAPY (FURAZOLIDONA) IN THE MINK'S YOUTH ALIMENTATION

Elena COSTĂCHESCU, Alexandrina DIAC

The research was concerned with the use of furazolidon in the standard dark coloured mink's youth alimentation for the stimulation of the growing process, the reduction of mortality and morbidity, because of the clinical and sub-clinical infections.

Observations were made on a number of 40 individuals to which it was administered in their ration 1% furazolidon. The results showed that the meal was well tolerated by animals. The body weight at the experimental plots has grown, but it was insignificant.

Obviously, the health state of the studied animals has improved, the wastage percent being with 10,5% smaller than the wastage canned on the whole study group.

EVALUATION OF TWO ORGANIC VARROA TREATMENTS AT THE HONEY BEE

Valentina CEBOTARI, Iu MOȘOI, V. DERJANSCHI, Maria MĂGDICI

The experiment has been held at an ecological (certificated) apiary SRL "Acafag" from RM with the purpose to prove the efficacy of two natural treatments against Varroa, disease produced by acarions. Two products Apiguard and Beevital were used; both of them contain organic acids and are volatile products with a high acaricid effect. The treatment begun in August until September: twenty bee colonies were treated with Apiguard and another twenty with Beevital, being kept in vertical hives (multiple storey, two corps) and horizontal (for every product 10 hives), in all 40 colonies. The products were used in accordance with the producer instructions. Before use and after finishing it, the infestation level of the bee colonies was calculated by taking samples of the mature bees. The efficacy of products was determined by the reduced infestation level. After Beevital and Apiguard administration was observed a high decrease of Varroa at the bee colonies. Therefore Beevital has an efficacy of 86,5% in multiple storey hive and 91,3% in horizontal hives and Apiguard – 76,8% in multiple storey hive and 87,7% in horizontal hives.

MILK PROTEINS POLYMORPHISM IN ROMANIAN CATTLE BREEDS, IDENTIFIED BY ISOELECTRIC FOCUSING TECHNIQUE (IEF)

V.A. BALTEANU, A. VLAIC, Anda Raluca RUSU, S. CREANGĂ, R.F. POP, V. CIGHI

There are six major proteins in cattle milk: α 1-casein, β -casein, α 2-casein, κ -casein, α -lactoalbumin and β -lactoglobulin. Each of these have many genetic variants (spread in different cattle breeds), with a positive or negative influence on milk protein content, manufacturing properties and efficiency of cheese making. In the present study we describe the isoelectric focusing technique (IEF), as a rapid and low cost method for all milk proteins allele identification directly from milk samples. The study was carried out on 236 Romanian Simmental and 27 Romanian Black and White cattle breeds. The genes and genotypes frequencies in the six loci were calculated.

THE OVARIAN RESPONSE TO THE SUPEROVULATORY TREATMENT IN CATTLE FROM BĂLȚATĂ ROMÂNEASCĂ BREED

P. COROI, L. SASCA

The embryo-transfer represents a topical reproduction biotechnic which follow the obtaining of more concepts from the animals with high value from the genetic and economical point of view. In cattle is considered that the number of gestations on every individual can rise up to 10 times through embryo-transfer. The most important stage of embryo-transfer is represented by the superovulatory treatment which determines the main morpho-functional alterations on the ovary. The present paper has followed the different factors which affect the ovary response to the superovulatory treatment. The study was performed on 5 cattle group from Bălțată Românească breed. Consecutively to the treatment there was obtained an average number of 21,6 corpus lutea.

PARAMETERS OF THE PROGRAM FOR GENETICAL AMELIORATION AND MANAGEMENT OF CAWS FROM BROWN SWISS BREED, IN MOLDOVA REGION 2005-2010

*Margareta MIHĂILESCU, I. NISTOR,
V. UJICĂ, V. MACIUC, Rodica DĂNĂILĂ*

Knowing the genetical structure of the brown Swiss caw population in Moldova region, as well as the phenotypical and genetical parameters of the main selection characteristics, the amelioration value of the breeders and of the main factors which determine the amelioration of a caw population, the authors developed a draft for a program regarding the zonal amelioration of the breed by combining the management of the amelioration factors with the plan of selection via matching management, and the technological factors of the cattle husbandry.

For the cattle population from Moldova region, research has been carried out by our group of specialists and the data needed for elaborating a draft of a program for long term amelioration of the cattles from the small as well as big farmers, individually or associated with this purpose.

The utilized method was based on the identification of the sources for genetical progress, and the measurement of the genetical progress induced by these methods.

➤ *Genetical progress determined by the bulls udes for reproduction. 82 bulls (15 local and 67 imported) were used; their genetical contribution, per generation, was estimated to be 427,77 kg of milk for the local ones, and 562,22 kg for the imported ones. The genetical gain would be 494,94 kg of milk.*

➤ *Genetical progress determined by the selection of the first-birth-caws. Starting from a natality percentage of 85 %, a reform percentage of 15 % for the young femmels and 20-25 % for the adult caws, and considering the selection intensity and the difference in selection. a genetical progress of 98,00 kg of milk was reached.*

➤ *Genetical progress determined by selective reform. Progresul genetic indus în populație prin reforma selectivă. The analyzed parameters were: the percentage of selective reform (12%), the repeatability coefficient (0,546) and the average milk production for the selected caws, thus reaching a genetical progress of 124,48 kg of milk.*

The sum of the three sources gives a total progress of 717,42 kg milk.

The authors estimate that this performance could be reached by 2010, if the program for the zonal management had been implemented and followed for the brown Swiss caws.

GENETIC MANAGEMENT IN SMALL POPULATIONS

M. GROZA, Gh. HRINCĂ, Elena FECIORU, I. CHIORESCU, Gh. BRĂDĂȚAN

The paper undertakes the problem of preserving in situ small populations as answer to the extinction process that more and more species and populations are undergoing, thus leading to loss of genetic resources, most of them irretrievable. The solution for preservation proposed in the paper, the method of mean kinship coefficient, is a new solution. The method offers the great advantage of selecting the most valuable individuals within the population (from the point of view of genetic resources preservation): the least related individuals in the population. Moreover, the paper takes on a method that represents in graphs the lineage of a population, a method through which one may assess the variance of family size and the relationships among these families.

STUDY OF SOME GENETIC PARAMETERS OF VARIOUS HENS POPULATIONS.

N. BUCĂȚARU, F. PRICOP, Gh. BÎRLĂDEAN

Within the crosses „ROSO-SL-2000”, „ROSO-SL-93” and „ALBO-70” there have been determined the coefficient values of heritability and correlation. The values of h^2 were approximate equal for all the crosses including such characteristics as the number of eggs (0,03...0,06) and the age of the first laid egg (0,17...0,19); some distinctions of h^2 have been observed in egg weight, at

34 weeks age accordingly – 0,25 at „ROSO-SL-2000”; 0,20 – „ROSO-SL-93” and 0,14- „ALBO-70”; the same thing could be mentioned on how varied was h^2 of the body weight: 0,18 and 0,17 at the first two crosses and 0,56 at „ALBO-70”. The phenotypical and environmental genotypical, correlatins differ frequently in concordance with the respective coefficients values in different populations, as well according to direction - a fact that imposes their calculation in each concrete population.

HISTOLOGY INVESTIGATION ON THE PHOTO STIMULATION INFLUENCE ON THE OVIDUCT TISSUES IN HENS

Daniela LADOSI, I. LADOSI, S.N. POP, Z. MARCHIS

Age of sexual maturity in Gallus domesticus speciae was constantly decreased both in female and males. It is well known that within this process several factors are involved: genetics (Jerome, 1956), body weight (Lister, 1966; Brody, 1980; Saler, 1984), age (Brody, 1988; Leeson and Summer, 1983; Zelenka, 1984), environment and feed (Eitanm 1991; Robinson, 1956) and chemical composition of the body (Summer and Lesson 1983; Zelenka, 1984). Trial was set up on 40 Rhode Island young hens, divided in two lots. Lot 1 was kept on the floor at a density of 7 heads / sqm, lighting program of 8 h/day and fed with rearing diet. Lot 2 was kept in cages under a 14 h/day light but fed with layer diet.

Every two weeks birds were slaughtered and oviduct samples of 1-3 cm were taken. Samples were then processed and stained with the PAS- hematoxilin-picro-indigocarmin method.

Development of various oviductal segments mucosa reveals a positive evolution as a result of photostimulation. This pattern can be explained by the fact that extra light has a dramatic effect on the hormonal balance, mainly on melatonine. Inducing melatonine functional activity probably triggers the start-up of the sexual hormones, which are the main influencers of the hystology modifications revealed at the oviductal mucosa level.

THE RESULTS REGARDING THE POLIOVULATION RESPONSE AT DIFFERENT HORMONAL PRODUCTS TO STEPPE GREY COWS

Elena RUGINOSU, G. TOBĂ, Mariana SOFRONIE, Adrieana POP, A. POP, Șt. CREANGĂ, M. PÎNTEA, I. MOROȘANU

Steppe grey is considered a vulnerable race in the danger to be lossed and which because of the fact that she doesn' resist in the productive competition with the graded up races, it continuous record the numerical decreases, puting into danger it`s existence. For this reason, in present she makes the objective of the genetic reserve conservation, the action having place into the national programmes for the preservation and management of animals genetic reserves, taking into account by special features regarding the diseases resistant, adaptability and the capitalization of the brutish fodders. The embryos freezing method would can to have a distinct contribution to achievement of genes reserve from this rustic race, but with a special adaptableness and immunity potential.

For this goal it is imperative to effected the poliovulation treatments of donors cows for to obtain a further number of able embryos to be freeze.

The study was effected to Dancu Iassy S.C.D.B. into dairy farm on nucleous of 15 cows Steppe grey breed, who were used as embryo donors in 2006 period. They were treated with different hormonales products, type FSH (Pluset-Serono-Italia, FSH-Rigaux, FSH-Ovogest, Folltropin V- USA, FSH-Sioux) and PMSG (Folligon-Intervet) in different doses and intervals postestrous(9-13 days), induced with PGF 2 α . The recovery of embryos was made at 7 days after artificial insemination, using unsurgical method.

The results of donors superovulation treatments were materialized in average of 9,1 luteal bodies / cow, with the variatios between 6 luteal bodies / cow, after treatment FSH- Rigaux and 11 luteal bodies / cow, after Folltropin-V treatment.

THE INFLUENCE OF AGE OF GENITORS ON GENDER DISTRIBUTION AT MERINOS OF PALAS LAMBS

L. STĂNCESCU

Research carried out have shown that in certain circumstances the ratio between genders is obviously modified and when it comes to causes the hypothesis of different ages of parental pairs was promoted. By mating young female sheep (1.5 years) with old males (7.5 years) a larger number of males is obtained (132 % males compared with females). By mating old females (5.5 years and 7.5 years) with young males (1.5 years) a larger number of females is obtained (130 %, respectively 132 % females if compared with males). The larger the difference between females and males, the greater is the probability of a future male product. By mating individulas of the same age, males and females in equal proportions resulted.

ASPECTS OF SHEEP ARTIFICIAL INSEMINATION AND SOME HERS INFLUENCE FACTORS

Anca DASCĂL, V. CIORNEI

Artificial insemination in sheep is scarcely widespread comparing with other domestic species. This has been due not only to fertility results being irregular and low but also because of the difficulty in the application of enhancements such as the use of frozen-thawed sperm. Although there is a lot of information on the use of different options to improve these artificial insemination results (such as transcervical application, the use of thawed sperm) commercial programmes can be classified on two general categories: those using fresh and refrigerated semen by intracervical deposition and more restricted, those using thawed sperm by intrauterine deposition. In artificial insemination practice is used a big number of extenders with a variable composition in accordance with the semen characteristics of this species and with the semen preservation method.

HAEMATOLOGICAL AND BIOCHEMICAL PARAMETERS OBTAINED SUBSEQUENT TO THE PASSIVE IMMUNIZATION OF SHEEP WITH ANTIADIPOSE SERUM

Simona GHITĂ, Stela ZAMFIRESCU, Elena SOGORESCU, Irina TOPOLEANU, Andreea ANGHEL

In order to reduce the adipose tissue in sheep, the immunologic methods were more and more accepted. In this experiment we researched the biochemical and haematological modifications appeared in lambs after the passive immunization for 60 days (the first experimental group, which was then supervised for the effect of the immunization on long term (120 days) and after 33 days (group 3 experimental) against fatness, comparable with the witness sides 2 and 4. The antiserum obtained after the active immunization of a he-goat, in the days 21, 27 and 34 from the beginning of the immunization, reacted very strongly with the antigen, until the dilution 1/64. The breeds of lambs to which the passive immunization was applied, were the breed Merinos of Palas, the type of meat and the Turcana breed. The haematological parameters at the sheep youth from the immunized groups on long term, have medium values more reduced than the witness (20,89% haemoglobin, 14,24%

hematocrit, 10% red cells, 8,66% number of leukocytes), after 60 days from inoculation. Comparing the haematological parameters in the 4 groups (of 120 and 33 days post immunization), the effect of the immunization was present at the group 3 experimental with 33 days post immunization by an increased percentage of lymphocytes (78,90%). In the first 2 months post immunization the lambs presented a slight hyperglycaemia, hyperprotein content and hyperlipidemia, comparatively to the data obtained 4 month from the immunization on the same groups (supervised for the immunization on long term -120 days). In exchange, the triglycerides had an opposed reaction (smaller values in the beginning - 60 days post immunization and increased at the end - 120 days post immunization -group 1, respectively 33 days - group 3 supervised for the immunization on short term), all compared with witness groups 2 and 4. It can be therefore said that the anti-fatness immunity serum influences the metabolism of lipids, especially of those for deposit, like triglycerides

THE INFLUENCE OF THE PHOTO-PERIODIC VARIATIONS UPON THE RAMS' SEXUAL ACTIVITY

Dorina NADOLU, Andreea Hortanse ANGHEL

The sheep from temperate areas have seasonal poly-cyclic sexual activity, which begins in the end of summer, together with the decrease of the day-light (since July) and continues more intensively when the days' duration decrease. At rams, it is noticed the same phenomenon of revert evolution of the day's duration and the sexual activity, males having an increased libido and a maximum sperm production, of good quality in autumn, until the beginning and even the middle of winter.

The experiment of watching the action of photo-period upon the sperm production was developed during February – April 2004, on 7 rams from the meat line which were subject to some light regimes (alternatively, 30 long days - 16 hours of light and 45 short day– 8 hours of light). The rams were watched under the aspect of sexual behaviour and sperm production (volume of ejaculations, the frequency of gatherings).

As a result of the experiment, it was registered a significant increase of the testicles' weight in the end of the period of short days (182 - 190g). Regarding the sexual behaviour of the rams and their availability for gathering the sperm with the artificial vagina, good results were obtained, 42.86% from males having erection, correct jump and ejaculation.

THE BIOCHEMICAL AND CYTOLOGICAL CHARACTERISTICS OF THE PRODUCTION "IN VITRO" OF SHEEP EMBRYOS

Elena SOGORESCU, Stela ZAMFIRESCU, Simona GHITA, Irina TOPOLEANU, Dorina NADOLU, Andreea ANGHEL

"In vitro" production methods involve four steps: recovery of primary oocytes from large antral follicles, maturation "in vitro" of these oocytes, fertilization of the matured oocytes with capacitated semen and culture of the embryos resulting. The present study showed the influence of different mediums at oocytes maturation, fertilization and different mediums for spermatozoids capacitation and different culture medium for obtained a better sheep embryos percent then comparative with the percentage of embryos development "in vivo".

Merinos of Palas sheep oocytes were collected surgically and after animals slaughter.

The medium used for maturation was bicarbonate-buffered TCM 199 supplemented with 10% fetal bovine serum (FBS), 5 µl /ml FSH, 5 µl /ml LH, 5 µl /ml estradiol, 0,3 mM sodium piruvate, 100 µl cysteamine and 2 mM glutamine. The percent of cumulus -oocyte complexes collected was 24,27% for big follicles, 35,48% for little follicles and 11 atrezic oocytes are collected into little follicles. The different culture medium (SOF medium with LF, SOF medium with BSA and EGF) influenced oocytes cleavage because the transformation percentage in state of 3-4 cells for SOF medium with LF was 27,29% and 26, 67% for SOF medium with BSA and EGF.

RECOVERY RATE OF OOCYTES USING FOLLICULAR PUNCTURE BY DIFFERENT TECHNIQUES ON GOATS

Irina TOPOLEANU, Stela ZAMFIRESCU, Elena ŞOGORESCU

The aim of the present study was to assess the current procedures used in goats for the oocytes recoveries based on laparoscopic-aided ovum pick-up (LOPU) and follicular puncture of ovaries from slaughtered goats. Oocytes collected by these methods were successfully used to produce embryos „in vitro”. Laparoscopic ovum pickup (LOPU) is a modern technique that may be used in programs of goat in vitro embryo production. Sexually matured goat donors were treated during the breeding season with FSH (follicular stimulator hormon) and subjected to laparoscopic-guided follicular puncture under general anaesthesia. The collected cumulus-oocyte complexes were collected and washed in medium TCM199 and were studied and calculated. The number and size of follicles, oocyte quantity and quality and recovery rate were evaluated. A total of 96 follicles were aspirated by laparoscopic method (10,6 follicles/goat), yielding a total of 58 oocytes (6,4 oocytes/goat) and a recovery rate 60,4% in goats. The oocyte recovery rate in goats differed significantly according to the follicular size. By follicular puncture of ovaries from slaughtered goats, 106 follicles was aspirated, yielding 54 oocytes (3 oocytes/ovarie). The percent of good quality oocytes was 38,88%. Follicular sizes from which oocytes were obtained was a determining factor in the recovery rate of good quality oocytes by the both techniques.

ANALYSIS OF ABBATOIR CHARACTERISTICS IN A POPULATION OF TRANSYLVANIAN NAKED NECK POULTRY

*D. DRONCA, N. PĂCALĂ, I. BENCSIK, T. VINTILĂ, I. PEŢ,
Marioara NICULA, Liliana COSMA*

In Romania, the Transylvanian Naked Neck hen breed is considered as a endangered population. This paper intend to point out the good quality of the carcass of this breed even after the laying period, based on the measurements and observations carried out after slaughtering. Observations sustain the recommendations to extend the raising of this breed in household farms, as well as using the breed for obtain in Romania the household farm chicken under the name of “Label Rouge”.

OBSERVATIONS REGARDING THE MICROBIAL FLORA IN BOAR SPERM

Angela STOICA, Paula POŞAN, P. TĂPĂLOAGĂ

The purpose of this study was to determine and analyze the presence of bacterial flora in boar sperm, depending on season and breed. The material used was represented by 33 analyze reports of 89 boar ejaculates. The boar breeds were: Great White, Landrace, Pietrain, Duroc, LSP – 2000, LS – 345 Periş and hybrids Great White x Duroc, Landrace x Duroc.

The results suggest the need to intensify the hygienic measures for prevention of further more microflora sperm contamination.

GENETIC PROGRESS SPREADING AND INBREEDING DECREASE BY ARTIFICIAL INSEMINATION UTILIZATION IN THE BOTOȘANI KARAKUL SHEEP

Elena FECIORU

The average values of the spermatic indices of seminal material collected from the Botoșani Karakul breed (ejaculate volume, spermatozoon mobility, spermatozoon concentration, spermatozoon mortality, spermatic anomalies, immature spermatozoon percentage) are framed in normal limits of the qualitative reproduction parameters of this breed. The results obtained by artificial insemination of females point out that the ram seminal material can be preserved by refrigeration and freezing. The spermatic indices of the frozen seminal material are lower than the ones of the refrigerated seminal material. The biochemical profile of the spermatic cell undergoes changes in the freezing process, some biochemical differences being revealed between gross sperm and frozen sperm: in the frozen sperm the organic substances and mineral elements (excepting sodium) have higher concentrations and enzymes have lower concentrations than in the gross sperm. Although the values of the reproduction indices are higher in the natural mating case, the application of artificial insemination is a gain concerning the genetic progress spreading, improvement of animal populations, inbreeding decrease and genetic strengthening of the traits of this breed.

THE ASSESS OF THE GENETIC STRUCTURE FOR B-LACTOGLOBULIN GENE (LGB) AT H-F COWS AND THE GENE POLYMORPHISM IMPACT ON MILK QUALITY AND PRODUCTION

*I. BENCSIK, N. PACALĂ, Jana STANCULEȚ,
Alena BENCSIK, Ada TELEA*

The A and B variants of the β -lactoglobulin gene (LGB) are most frequently involved in bovine milk production. The variant are different because of shifting of two amino acids from the poliproteic chain and two nucleotides from the LGB gene. The AA genotype is associated with a higher milk production and a more rapidly coagulation, and the genotype BB is associated with a higher percent of casein and milk fat. The milk from the cows with LGB-AA genotype has a higher percent of lactoglobulin and a lower percent of casein and fat, compared to the cows with LGB-BB genotype. More chese is obtained from cows with LGB-BB genotype comparative to the milk from the cows with LGB-AA. The suitability for industrial usage is better for milk produced by cows with LGB-AA, because it is more stable at higher temperatures. The genotype LGB-BB is associated with a higher mastitis resistance because it has lower somatic cell content (SCC), and it can be used as a good indicator of the udder health. For the study 24 cows were genotyped for gene LGB variant A and B. The cows were from HF breed with mean milk production of 8444 milk kg/305 days, 3.90% fat, 3.3% protei. Cows were free housed on a grid floor. The analyzed population is not in genetical balance because after selection the frequency of the A allele (0.63) is higher than the frequency of the B allele (0.37). The mean milk production on standard lactation is bigger at cows with LGB-AA; it is significant higher at 1% threshold comparative to the LGB-AB and LGB-BB genotypes. The fat percent is significant lower at 5% threshold for the LGB-AA genotype compared to the LGB-AB and LGB-BB. The LGB-BB genotype has the highest percent of fat. Between the analyzed genotypes the protein percent has no significant difference.

STUDY ABOUT THE POSSIBILITY OF PHASE FEEDING OF THE YOUNG QUAILS FROM A EGSS-MEAT MIXT POPULATION

*Elena POPESCU-MICLOȘANU, L. IONIȚĂ, I. CUSTURĂ,
Minodora TUDORACHE, Cristina NEGRE*

The experiment has been placed on S.C. Ferma Nova Bucharest on 375 young quails divided in 3 equal lots. The youth quail have been raised 2 weeks on the ground and then transferred in batteries. Their feeding was made in 2 phases, with mix feed with around 2984 kcal ME /kg and 25,1% BP in the period 0-25 days and 3124 kca l/kg and 20.29 % BP between 26-42 days at the control batch. The first experimental batch received mix feed made according to same recipe in the first 14 days of life ,after that the energy value was decreased at 2864 kcal and the protein at 22.8 %. The second experimental batch has received the same recipes with the control, but their change was made at 14 days of age. The body weight of the quails was significantly bigger in the control group and the first experimental batch by comparing with the second experimental group at 28 and 35 days of age. The differences between batches had become insignificant at 42 days.

THE COW MILK AS BIOACCUMULATION MEDIUM FOR ORGANOCHLORINE PESTICIDES AND THE IMPACT ON THE HUMAN HEALTH

C.I. WEBER, Gh. MUREȘAN, B. GEROGESCU

The intensive agriculture was possible by using the chemical substances to combat the pests at the crop plants and farm animals. The first effect of using these chemical substances was that the production growth, but in time the negative effects show up on the soil, the flora and fauna, and the humans health, too. Among the chemical substances most used were organochlorine pesticides. The organochlorine pesticides are dangerous because their traits such as: high stability and remainence in the environment, affinity for fat animal and vegetal tissue (milk, red meat, eggs) and bioaccumulation in environment and fat tissue. This fact makes possible the entrance of these substances in human trophic chain through soil-forages-animal--human population, with some negative effects on the human's health. Many researches, at national, European and world level, show the presence of this organochlorine pesticides both in the environment and animal products (cow milk, red meat, eggs), but also in human body (human milk).

THE EFFICIENCY OF UTILIZATION OF SUSTENANCE FROM MULBERRY TREE LEAF BY SILKEN LARVA, DEPENDING ON TYPE

M. DOLIȘ

During the experiments performed upon different types of mulberry tree, the mean ratio between the dry substance from the ingested leaf and the dry substance gathered by larva in the form of body matter, during all the larva period, was 4,6901, in this case, the efficiency of conversion of ingested food in the body matter of larva (ECI-body matter) being 21,81%.

As regarding the utilization of sustenance from the mulberry tree leaf in the silk shell of cocoons, the mean ratio between the ingested dry substance and the dry substance from the silk shell of cocoons was 10,5633, the efficiency of conversion of ingested food in silk shell (ECI-silk shell of cocoons) being, in this case, 9,47%.

INFLUENCE OF PROTEAN AND POWER LEVEL OF RATION ABOUT PRODUCTION AND REPRODUCTION AT SHEEP MOTHER

Maria CORDUNEANU, Maria UNGUREANU

In literature of specialty, the fodder standard for sheep are establish in accordance with weight, prolificity and physiological form, but they didn't say in accordance with production for these are exploited.

The convenience of growth sheep mother in permanently stabulation, impose the control of sheep food in accordance with their principal production (meat – milk – wool), make up of fodder ration constitute from unique mixture with fibrouses, concentrates, brutishes and juices with different level proteic and power, rations which goes at this products to be maximum.

At Merino from Palas which was improve in direction of goddaughter wool production and grown in plain zone of Romania, doesn't exist rations institutionalize for wool production by 7,5 - 8,5 kg wool and only for sheep with a production by 4 - 5 kg wool. After actually methodology for big wool productions, norms are establish through equable adding the 0,15 UN and 18 g PBD for each kg of wool moreover, without to allowance that an animal of a big productivity turn account better fodders and that the rations must to have a concentration in nourishing substance bigger because a sheep through dry substance quantity ingurgitate to assure nourishing requirement establish by norm.

From this reason we porpose to establish an optimal level protean and power of a fodder rations for the sheep Merino from Palas which to get at realizer of some productions accordingly of breed, rations which can eliminate wastage by fodder and to establish the best ration with unique mixture for sheep grown in the plain zone.

INCIDENCE OF *FUSARIUM* SPECIES AND OF THEIR TOXINS IN THE COMPOUND FEEDS FOR POULTRY

Cristina TABUC

The genus Fusarium includes species of mesohygrophilous mycetes that grow on plants in the cold and temperate regions and that produce a large number of substances that are toxic to the humans and animals.

The level of fungal contamination, the isolation and identification of the Fusarium species was done on samples of compound feeds for poultry (broilers, layers and reproduction layers). The fungal contamination was evaluated by cultivation on malt-agar and incubation for 7 days at 25°C. Fusarium species were identified on 53% of the analysed samples next to other toxinogenous species belonging to Penicillium, Aspergillus, Rhizopus and Mucor genera.

The following Fusarium species were frequently observed in the analysed samples: Fusarium culmorum, F. graminearum, F. moniliforme, F. oxysporum, F. poae și F. sporotrichoides, species known to produce mycotoxins (toxin T2, deoxynivalenol, nivalenol, zearalenone and fumonisin).

Mycotoxin determination with the immunoenzymatic method ELISA revealed the presence of low amounts of deoxynivalenol and zearalenone; toxin T2, nivalenol and fumonisins were not present, or if they were present their concentration was so low that it could not be detected by the Veratox kits that were used.

EFFICIENCY OF USING DIETARY ALFALFA PRESERVED BY DIFFERENT METHODS IN FATTENING STEER FEEDING

II. VOICU, Dorica VOICU

The efficiency of diets based on alfalfa preserved as hay, haylage and wilted alfalfa was studied on Romanian Spotted steers fattened from 150 to 300 kg and from 300 to 450 kg. The following average values were observed throughout the entire period of growth and development:

- Dietary energy digestibility and dietary protein digestibility ranged between 69% and 72 %, and between 63% and 75%, respectively.*

- *The use of diet as metabolisable energy ranged from 58% in the hay-based diets and 62% in the haylage-based diets, with intermediary values for the wilted alfalfa-based diets.*
- *The gross efficiency RE/ME ranged from 23.35% (hay-based diets) and 25% (haylage-based diets) in the first category of steers and between 15.9% (hay-based diets) and 19.7 (haylage-based diets) in the category 300-450kg.*
- *The wilted alfalfa-based diets and the haylage-based diets provided better animal performance than the alfalfa hay-based diets, from 1403g to 1062g in the category 150-300 kg and from 1400g to 1153g in the category over 300 kg.*

EFFECTS OF PROBIOTIC AND PREBIOTIC SUPPLEMENTATION ON EGG QUALITY AND LAYING HENS PERFORMANCE

Cristina Radu-RUSU, I.M. POP

The goals of the study were to assess the effects of Biotronic[®] and IMBO[®] feed additives on the performance and egg quality of commercial laying hens approaching the end of the laying cycle. The trial was setup at the Animal Husbandry Faculty's Experimental Farm in Iasi, Romania, during a 4 weeks period. A flock of 90 hens, 57 week old ISA Brown layers were introduced into a completely randomized experimental design with three groups, with 30 birds each.

Experimental treatments consisted in feeding hens a corn-soybean meal basal diet with supplementation of 0.3 % Biotronic[®] (treatment E1) and of 0.1% IMBO[®] (treatment E2).

The studied parameters are listed below: hens living weight and feed intake dynamics, feed conversion ratio, laying intensity, egg mass production, egg weight, eggshell weight, eggshell thickness, shell index, Haugh Index.

Both treatments which received supplemented feed given superior results, concerning the production performances, the internal and external egg quality.

FODDERS'S POLLUTION AS A RISK FACTOR FOR THE ANIMALS AND HUMAN' HEALTH

Irina ISAC, I.M. POP, A. GRUBER

Pollution is a complex of phenomena that has changed and is about to change the environment against the ecological equilibrium. The polluting factors which affect water, air and soil generate situations that threaten the normal and complete evolution of life, that determine the installation of structural and functional unsettlements at the level of vegetal and human organism (Lăcrămioara Ivănescu, Constantin Toma, 2003).

Nowadays, the threat of pollution has become so obvious that most of the countries with a developed economy applied drastic measures of prevention and combat this scourge.

In order to do some efficient actions of prevention, avoidance or remedy, of the pollution's effects it's important to know all the ways and moments when a potential risk of pollution or contamination can manifest itself, as well as the effects of various polluting agents against the environment and organism, which have a negative impact and cause major structural and functional changes of vegetation and animals, with repercussions to the human's health.

Vegetal fodders represent an important transfer from the soil , air and water's polluting agents to man, through the animal produces eaten by him.

The main toxic substances found in the fodders, can be grouped in the following way:

- *Antinutritional substances that can naturally be found in fodders;*
- *Toxic substances that can naturally be found in fodders;*
- *Toxic produces that contaminate or grow themselves in fodders during the conservation and the processing;*

- *Mycotoxins;*
- *Pesticides;*
- *Heavy metals and metalloids with toxic potential;*
- *Pathogenic microorganisms.*

Each of these groups is presented and analyzed, the final conclusion being that the animals produces may contain toxic substances transferred from fodders, which can jeopardize the food security of people. That's why it's necessary to insist on the chain: soil- plant- animal- man.

RESEARCHES REGARDING FOOD VALORIFICATION DURING LACTATION FOR SHEEP WHICH ARE SPECIALIZED IN MILK PRODUCTION

Daniela JITARIU, Violeta SIMIONESCU

In Romania, the creation and growth of some specialized in milk production sheep population represents an important link of profitableness of this species; for this purpose, at I.C.D.O.C. Palas Constanta a such sheep population has been created. In consideration of , the sheep which are specialized in milk production have a similar metabolism with milk cows, it is necessary to elaborate some specific feed technologies of these sheep, in order to emphasize their maximum genetic potential. In this context, the present work-paper studies the influence of experimental feed rations on nutrients consumption during lactation, for a more efficient and constant utilization of energetic substances (expressed in Milk Nutritive Unit- UNL), and especially of proteic substances (expressed by Digestable Protein- PDIN and PDIE) from forage by the animal organism.

TESTING THE VARIOUS LEVEL OF FODDERING AT FEMALE YOUNG SHEEP FOR EARLY COUPLING

C. NEACȘU, Gabi NEACȘU, Adriana VICOVAN, Doina ARDELEANU, Alina NICOLESCU

Establishing an optimum level of foddering the female young sheep creates the possibility of precocious introduction in the economic circuit and thus the maximization of the genetic potential. The experience was made on three lots of female young sheep; of 10-11 months old, from the population specialized for milk production. The witness lot was fed only with green mass by grazing, and the other two lots were administrated a supplement of 200 g and respective 300 g of concentrated. The consumption of dry substance / animal / day was of 1.05-1.07 kg at the 1st and the 2nd lots and of 1.16 kg at the 3rd lot, the latter consuming more with approximately 8.41-10.48%. The body weight in the moment of introduction to coupling was of 33.8-38.7 kg bigger at the 3rd lot with 14.50 % beside the 1st lot and with 6.03% comparatively to the 2nd lot. At the date of introduction to coupling, the proportion of females entered the heating period was bigger at the 3rd lot (supplemented with 300 g concentrated) with 28.57 % comparatively to the 1st lot (without supplement) and with 5.88% beside the 2nd lot (supplemented with 200 g concentrated). In the conditions of making a body weigh of 65-70% from the weigh of the adult female, the female young sheep have sexual cycle in proportion of 70-80% the rate of pregnant females being of 60-65%.

THE TECHNOLOGY OF GOATS' FODDERING DURING MILKING THE KIDS

C. NEACȘU, Gabi NEACȘU, Adriana VICOVAN, Doina ARDELEANU, Alina NICOLESCU

The researches were made on goats being in the kids' milking period, from the local period, being organized on four lots, foddered with ratios with a similar nutritional value, but different by their structure. The consumption of dry substance / animal / day was of 1.97-2.18 kg, the differences between lots being very small. The highest average daily milk production was made at the 2nd lot

(ratio of fibre type), this exceeding the 1st (witness) and the 4th lot (ratio of semi-concentrated type) with 14.6%, and the 3rd lot (ratio of juicy type) with 47.3%. The milk content in fats had the highest value at the 4th lot, this exceeding the 2nd lot with 19.25%, the 1st lot with 15.3% and the 3rd lot with 10.4%. The weigh increase rate of the kids at the age of 60 days was the highest at the 4th lot, followed by the 2nd lot. The best results were obtained by feeding the goats with fodder ratios of fibre and semi-concentrated types.

THE IMPACT OF THE SOMATIC CELL COUNT ON THE MILK QUALITY

Gabriela CRIȘAN, Gh. MUREȘAN, Daniela CRIȘAN

The qualitative and quantitative controls of the milk yield is an absolute, determinant factor in improvement procedures, as each farmer wants a greater efficiency in exploiting the milk cows.

The somatic cell count represents an important criterion in evaluating the udder's health state and in estimating the milk quality. The somatic cell count is an ordinary, but also complex and confusing subject in the milk industry, as it's important that producers understand the importance of the somatic cell count, and the relation between it and others factors. The somatic cell count is related to the animal health, milk quality and has direct implications on productivity, being influenced by lactation, lactation state and not ultimately individuality.

THE PROJECTING AND THE ORGANIZATION OF A FARM OF COW MILK TO A CAPACITY OF 50 HEADS

G. ONACIU

The general objective from this paper, starts from existence on market of a requirement of technological module standardized for growth dairy cattle where at are added and requirement measure from National Program for Rural Development 2007-2013, Modernization the agricultural exploitations, presented the real project the good documented and in sight approval financial support. The farm project proposes the settlement optimum parameters of exploitation, their in a integration circuit of genetic program for improvement milk production and the optimization proceeding of milking, preservation and the integration in a farms program for the application the new technologies from area and turns to good account the milk production. The necessary of agricultural surface that comes for one dairy cow in the fertility conditions of the soil from the Transylvania area is 0.1 ha/head lucerne, 0.15ha/head hay field, 0.12 ha/head silo corn, 0.55 ha/head pasture and 0.15 ha/head cereals. The maintenance system of milk cows is in half opened stable(could), build volume/cow 70 m³ from metallic structures 130 kg/m² snow, wood side walls and for roofing, flax wall system, spout and water-shot, individuals berths for resting (2.5/1.25), adaptors antifreeze, 1/25 index of natural illumination, metallic pool for stoking the dejections. The projecting and the execution of this shelter need a financial effort between 3500 and 4500 euro/milk cow.

THE PROJECTING AND THE ORGANIZATION OF A FARM SPECIALIZED IN FATTENING YOUNG CATTLE WITH AN ANNUAL CAPACITY OF 360 TONS OF MEAT

G. ONACIU, E. C. JURCO

The fattening area has its purpose to produce average weight young cattle, from Romanian Yellow Spotted breed, in continuous growing system. The quantity of fresh meat that must be delivered annually is of 360 tons at an average weight of delivery in live, of 550 kg/head at a period of fattening of 517 days that means that we will have to deliver annually 655 heads of young cattle,

with the condition of not losing anything in all four phases of fattening. To reach this yearly goal, the capacity of the fattening must be of 978 heads at an index of annual occupying of 95% and of 67% on the total period of the fattening. The total necessary of surface for the production of the fodder is of: 388 ha from which, 199 ha cereals (corn and barley), 121 ha fibrous (Lucerne, trefoil) and 68 ha silo corn.

POULTRY MEAT QUALITY AS INFLUENCED BY FOWL'S TRANSPORTATION CONDITIONS

M.G. USTUROI, I. VACARU-OPRIȘ, R.M. RADU-RUSU

The pH level of the poultry meat is straightly influenced by the conditions that occur during the farm-slaughterhouse transportation.

Even the transportations is made on short distances, a too high density/coop, some inappropriate climatic conditions and the absence of the rest period before slaughtering lead to a suddenly pH decreasing in the meat, reaching a 5.4-5.6 level less than two hours postmortem. Meantime, the meat gains a pale appearance, the tenderness and the juiciness decrease and the processing losses increase. An unlikely situation occurs after a too long transportation period, followed by an immediate slaughtering of the birds, the pH reaching thus a level of 6.0, as a consequence of poor glycogen and ATP supplies within the muscles, leading meantime to a high probability of meat's microbial dangerous contamination.

The goal of these researches was to study how the density of the birds in coops and the rest period length before slaughtering influence the pH value of the poultry meat.

OBSERVATIONS ON THE MORPHO-PRODUCTIVE FEATURES OF THE ROMANIAN BLACK SPOTTED MEMBERS OF THE BOVIDAE FAMILY FROM THE JORA FARM, COUNTY IASI

V. MACIUC, V. UJICĂ, Rodica DĂNĂILĂ

The genetic melioration of the members of the Bovidae family and the selection of the most valuable individuals to produce new generations with a superior genetic fund represent „the foundation on which one builds the production of milk and meat”. The increasing of the genetic potential and the productivity of the present-day populations and breeds of members of the Bovidae family together with the optimization of the exploitation technologies in the small and medium size farms, the optimization of correct management and economic administration represent important ways to increase the milk and meat production that brings profit and the numeric augmentation of the present-day livestock and their qualitative improvement.

THE STUDIES OF THE PRODUCTIVE FEATHERS OF DOMESTICATED QUAILS

Suzana MODVALA, A. ȘUMANSCHII

The domestication of the quails has been done in XII century by japans. The domesticated quails have been imported in Europe and USA. The quails for the met and eggs production were imported in Republic of Moldova from Russia the moment there are grown a lot of different breeds of quails in the S.R.L. Anotex – invest agro.

The breed (type) of quails named faraon it is grown for meat production.

Accordingly to the studies it is necessary to mention:

- the body weight of mails at the age of five weeks it is 202,1±0,10 g;

- the body weight of females it is 208,3±0,12 g;

- the daily gain during five weeks of growing it is between 5,6±0,03-5,8± 0,04g per/ day;

- the specific feed consumption is 2,53 kg/ kg of daily gain;
- the slaughtering output is from 77 to 82 %, where the breast proportion is 31-32%.

The breed (type) of quails "Black Grey" it is specialized for the eggs production. it is necessary to mention that the eggs production during 12 months was 284 eggs. The higher level of eggs production (25,3 eggs) was received at seven weeks of the eggs laying. The maximal intensity of –(85%) the females produce at the age of 17-18 weeks of life, or after 12 weeks of life.

The eggs have a specific color and the length of the eggs is between $3,1 \pm 0,02$ cm, and the diameter is between $2,4 \pm 0,01$ cm. The weight of the eggs was between 9,3-12,1 g, or the average of these index was 10,7 g.

After the morphological studies of the eggs it is necessary to mention that the white of the eggs was- 58,5%, and for the yolk –31,6 % and for the mineral cover – 9,9 %.

In the final (accordingly to Rudolf kiwitt), the difference between the quail eggs and the hen eggs is that the first contains by five time more P, by seven point five time more Fe, by six times more vit. B1, and by fifteen times more vit. B2.

RESEARCHES CONCERNING THE MAIN QUALITATIVE FEATURES OF MILK IN A BUFFALO POPULATION FROM SĂLAJ COUNTY

Aurelia PECE, Z. MARCHIȘ, A. CÎMPEAN

Having in view the fact that in Sălaj County there are the greatest buffalo forces from country, so there obtained great milk quantities from this species, we considered opportune to do researches concerning the hygienic quality of this especial important food. The notion of milk quality is very complex, hard to be use up by a single researcher, so I want that in present study to tackle the variation of great components of buffalo milk depending on diverse factors. Even the body resistance of milking buffaloes is more increased given to another females, however the possibilities of milk intravital contamination are greater due to environment factors' aggression, bend of specific behavior on pasture by frequent baths in wet places. The contamination of milk and products obtained from buffalo milk with residues is possible having in view the fact that part of them are liposoluble and could have greater concentration on volume unit than other products, reason for which periodic supervision is imposed. Analyzing the buffalo competitiveness problem it can be concluded that they provide inferior performances than cattle, but the advantages must be appreciated through technical-economical efficiency viewpoint reported to biological special features of adaptation to different breeding and exploitation conditions.

THE ELECTROMAGNETICAL FIELD AS A FACTOR FOR IMPROVING THE FEATURES OF GROWING THE GOOSLINGS

Elena SCRIPNIC, Iu. SCRIPNIC

The production of geese meat is becoming more large because of the improved growing technologies and their biological characteristics. There are a lot well known factors which have a positive influence on the growing and development of the gosling. But the physical factors could have an positive influence on the growing indexes too, but they have to be studied jet.

The positive results of the scientific studies about the influence of the magnetic field were held in deferent fields, but less in poultry. It is known that the growing technologies of the poultry are successfully wed another kinds of irradiation, what improve the productive results.

Our studies what were held before with the electromagnetical field in the hatchery technology showed the increasing of the indexes and made us to study the influence of this factor on the growing and developing indices of gooslings.

THE VIABILITY ASSES OF THE LIGHT CHICK BREED EGGS FOR INCUBATION

**I. BENCSIK I., N. PACALĂ, D. DRONCA, Jana STANCULEȚ,
Alena BENCSIK, Ada TELEA**

The viability of the chick embryos from light breed was based on the principle of evidencing the bio-electromagnetic field generated by the embryo cells. The bio-electromagnetic field can move a pendulum indicating its viability. In our experiment, in order to practically demonstrate this phenomenon we incubated 120 eggs. The eggs were from the same breeding facility and they belong to light breeds. The experiment was repeated. 60 eggs were in the control group (M) and 60 were the experimental group (E). The eggs that manifested visible activity of the bio-electromagnetic field were chosen to be included into the experimental group. In the experimental group M₁ six clear eggs were eliminate at the first mirage (10%). In the experimental group E₁ only one egg was clear. In the second experiment at the first mirage five clear eggs were eliminated (8.33%) from the M₂; in the E₂ no egg was eliminated. The hatching percent was 81.66% and 83.33% in the M₁ respectively M₂, and 91.66% and 90% in the E₁ respectively E₂. The difference between the hatching percent of the M₁ and E₁ was 10% and 6.67% for the M₂ and E₂. The mean difference between the control groups and the experimental groups was 8.33%. This difference is very important economically.

THE EXPANSION OF MELLIFERA SPECIES

St. LAZĂR, O.C. VORNICU, M. DOLIȘ, B. IGNAT

The authors present retrospectives regarding the spreading area of the most important species of the Apis, Apis mellifera king which has become more and more wide spread owing to its qualities. The work presents aspects of the spreading of this species both on latitude and on longitude, as well as the "conquest" of new territories at the same time with the Europeans exode towards the "New World". In some of these territories, the bees found very good conditions of development such as in some areas in Australia, Argentina, Mexico, Chile, etc., countries which are considered among the main producers of honey in the world.

Along the time, under the influence of the climate and environment, natural or geographical breeds were formed, known in taxonomy as subspecies. All these breeds were the result of the general selection.

From among the numerous geographical breeds spread in certain regions of Europe, the Near East, Caucasus and Africa only some of them have been proved to be really important, all of them formed in Europe: A.m. iberica, A.m. mellifera, A.m. ligustica, A.m. carnica and A.m. caucasica. Although there have been certain attempts to classify the breeds according to a series of peculiarities of bees in certain zones, these are doubtful and lead to a series of controversies in the author's opinion.

By introducing the african bee A.m. scutellata in Brazil, this one got new territories owing to its genetic peculiarities, representing a real danger because of its excessive aggressiveness. The risk of the expansion of the non-tropical bee which followed is however limited because it does not survive at average, annual temperatures of 16°C.

The expansion on the Earth of the mellifera bee is due mainly to people who have realized the economic, ecological and social importance of bee keeping.

THE OBTAINED PERFORMANCE AFTER THE COLLECTION APPLIED TO IMPROVE THE COLORS AT THE SHEEP RAISED FOR THEIR SKIN

C. PASCAL, F. DOROFTEI, V. STAN, I. PADEANU, T. DIMA

The intensification of the selection progressive directional works, as a consequence of the international demand, has determined the advent of new types of skin, that are differenced by the colors and by the modelling and the type of the loop. According to these preoccupations, recently, at a world level appears some tendencies that are headed for a variety of colored skins and of the light komor (with beige shades) and of the wild ones with all their valuable shade.

Another contoured tendency in the last period at a world level has its origin in the forming zone of the Karakul rase and overlooking the variety of colors at the Karakul Karakalpak type. In Uzbekistan there is already formed and consolidated a rich gene pool represented by 10 types inter-racial and of elite and high productive (Iusupov S., 2004).

The obtained results shows the fact that the presence of the desired type of sheep with black skin is found in a bigger proportion at the sheep from the zoothechnical exploitation from the Iasi region, which means that in this zone the black sheep selection for the color intensity has a very good level, superior to the selections from the other regions.

The performed estimations in 2004 to the efectives included in the production surveillance that are in the Iasi regions dignifies that the total of 411 grey sheep at 373 sheep ascertains the dark and normal nuances, and at the difference of 9,3% it was registered the open grey nuance. Seeing the big weight of these raising sheep from the same zone have succeeded that first plan of supervision of copulation to redus the light grey sheep's weight at 4,5%.

CONSIDERATIONS UPON ECONOMIC EFFICIENCY IN DAIRY FARMS BY GROSS MARGIN ASSESSMENT

Agatha POPESCU

Romania's entry into the E.U. imposes the increase of profitability in dairy farms. The main criterium for evaluating economic efficiency in the E.U. farms is Standard Gross Margin (SGM). It allows farm ranking and their comparison based on their economic and financial performance. This study presents a model for gross margin calculation in two dairy farms, F1 and F2, and economic efficiency assessment is based on the comparison with the average SGM registered in the 8 Euro-regions of Romania as well as with the one existing in some of the E.U. countries. The farm F2 achieved a higher gross margin compared to the one recorded by F1. Also, gross margin obtained by F2 is higher than the average SGM of 7 Romanian Euro-regions, Macedonia and Greece, but lower compared to the average SGM recorded in Italy and Portugal. This reflects the gaps existing between Romania and the E.U. countries concerning performance and profitability in dairy farming.

STUDY CONCERNING THE EVALUATION OF FINANCIAL RESULTS IN COMBINED FODDER INDUSTRY

I. PÎRVUTOIU, Agatha POPESCU

The study aimed to evaluate financial results in combined fodder industry based on Balance Sheet and Profit and loss Account, belonging to producing commercial company in the years 2004 and 2005. The financial results are the direct consequence of material, human and financial resource management, but also of its relationships with its suppliers, beneficiaries, creditors, public budget etc. That is why, the analysis of financial results shows the performance achieved in

the production and commercialization activity , as well as the causes which have determined them. The industry producing combined fodder is deeply affected by the increase of operating expenses (raw materials, electricity, gas, water etc) influencing total costs whose level exceeded the rhythm of income increase resulting a profit by 28 % lower in 2005 compared to the one registered in 2004. The turnover reduction by 8.22 % decreased assets and equity efficiency. Solvency, efficiency and profitability ratios reflect a trend of diminishing of financial performance . As a conclusion , the company has to pay more attention to its financial strategy, based on a new policy for developing production diversification and delivering higher quality combined fodder recipes in the market in order to enlarge the number of clients and increase its sales in the future.

STUDY CONCERNING RISK EVALUATION IN COMBINED FODDER INDUSTRY

I. PÎRVUTOIU, Agatha POPESCU

This study aimed to evaluate business risk in case of a combined fodder producing company. The Romanian combined fodder producing industry is facing more and more problems due to the imported products and delivery and payment offered by intermediary traders. The increasing price for the required inputs for producing combined fodder recipes leads to a financial unbalance , to cost increase and profit reduction, to business risk and uncertainty . That is why risk evaluation is so important even before bankruptcy to happen . In this study, risk analysis is based on Canon and Holder Model. In case of the analyzed company ,Z function registered positive values in the both analyzed years , 13.424 in the year 2004 and , respectively, 19.472 in the year 2005. Therefore, a Z value higher than 9 shows that the company producing combined fodder is facing a reduced risk for a moment, ranking between 10-35 % . As a result, firm managers have to pay more attention to product diversification and quality, market extent, net sales and profit.

ASPECTS REGARDING THE REARING PARAMETERS ON TWO LOTS OF ORNAMENTAL CARP FED WITH DIFFERENT RATIONS INTO RECIRCULATING SYSTEM CONDITIONS

Aurelia MIHALACHE, L. OPREA, V. CRISTEA

Recirculation systems are becoming increasingly popular as they provide a predictable and constant environment for growing fish. The aim of the present paper was to determine the influence of different levels of ration stabilized according to metabolic weight on ornamental Japanese carp rearing into aquaculture recirculation system. The metabolic weight in fish is the body weight to a power of 0.8. In the closed systems, which was represent by four aquariums with useful capacity of 180 l, was effectuated simultaneous two experiments, each with duration of 34 days. During the first experiment were reared 11 ornamental carp with mean initial weight of 104, 6 g/ex. At the end of growth period, mean final weight reached 142, 8 g/ ex. The ration utilized in this experiment was 9 g/ kg gr met and the food conversion ratio was 1, 45. During the second experiment were reared 11 ornamental carp with mean initial body weight of 104, 2 g/ex. At the end of growth period, mean final weight reached 158, 5 g. The ration utilized in this experiment was 13 g/ kg gr met and the food conversion ratio was 1, 74. Each variant was tested in two repetitions. The feed used was Soprofish 38 pellets with rough protein 38 % for both experiments and the survival rate of biological material was 100%.

THE INFLUENCE OF AMBIENTAL TEMPERATURE ABOUT LUMBRICUS TERRESTRIS PROLIFICITY

A. GRUBER, I.M. POP, B. PĂȘĂRIN

The rational alimentation of fish assure the progress and biological equilibrium of this. The most efficiently results after we feeding a vary diet in correspondance with species oquarium fish.

The breathind nutriment contain fundamental nutrients who is necessary for fish increase, thid assure a power colour, the fish are active and resist at the pathogenic agents attack.

This study presentation same results with allud at temperature influence about prolificity of Lumbricus Terrestris, an important species who forming the hummus and who feedingthe aquarium fish, because contein protein.

The conclusion of this experiment are: the prolificity of Lumbricus Terrestris are direct proportional with environment temperature all time, in cold and warm season. The temperature of Lumbricus Terrestris is 17 – 19°C, and the reproduction period is in the cold season .

A COMPARATIVE STUDY OF SOME MORPHOLOGICAL AND BIOCHEMICAL PARAMETERS OF *CARASSIUS AURATUS GIBELIO* AND *CYPRINUS CARPIO*

Gabriela VASILE, Elena CIORNEA

*The paper analyzes some morphological (total length, standard length, maximum height of the body, circumference and weight) and biochemical (catalase and peroxidase) parameters in two cyprinid species, namely: 2 year-old crucian (*Carassius auratus gibelio* Bloch.) and carp (*Cyprinus carpio* L.) growing in the accumulation lake of Tansa-Belcești. For biometrical analysis, 30 individuals of each species have been investigated, while the biometrical study was performed on 15 individuals of each copy.*

In the last stage in the analysis of the morphological parameters, the values of the most representative indices and bodily coefficients, i.e.: the profil index, the Fulton coefficient and the Kiselev index, have been established.

As to the biochemical parameters, a comparative analysis of the activity of some muscular oxidoreductases - enzymes involved in the oxidative stress - has been developed.