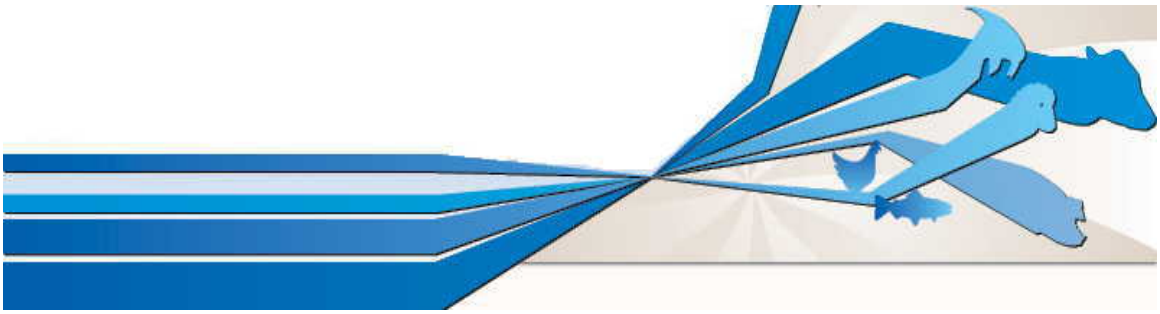

РЕПУБЛИКА МАКЕДОНИЈА
УНИВЕРЗИТЕТ „Св. КИРИЛ И МЕТОДИЈ“ ВО СКОПЈЕ
ИНСТИТУТ ЗА СТОЧАРСТВО – СКОПЈЕ

REPUBLIC OF MACEDONIA
UNIVERSITY “Ss. CYRIL AND METHODIUS” IN SKOPJE
INSTITUTE OF ANIMAL SCIENCE – SKOPJE

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1.	GSCB	Говедарство	Cattle Breeding
2.	GSSG	Овчарство и козарство	Sheep and Goat Breeding
3.	GSPB	Свињарство	Pig Breeding
4.	GSPO	Живинарство	Poultry Breeding
2.	ANNU	**Исхрана на домашни животни**	**Animal Nutrition**
3.	FSQU	**Квалитет и безбедност на храна**	**Food Safety and Quality**
4.	ENRE	**Екологија, природни ресурси и животна средина**	**Ecology, Natural Resources and Environment**
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Genetics and Selection

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1.1-GSCB-01

INJECTION OF HCG AND GNRH AFTER SYNCHRONIZATION OF HEATSYNCH AND SELECTSYNCH METHODS TO INCREASE THE FERTILITY OF DAIRY COWS

Majid Shahmoradi[1], Fatin Cedden[2], Hamid Amanlou[1], Ali Rezaei[3], Masoud Arabshahi[3]

[1]Department of Animal Science, Faculty of Agriculture, Zanjan University, Iran
[2]Department of Animal Science, Faculty of Agriculture, Ankara University, Turkey
[3]Khoramdarre agri.-industry and livestock company, Iran
shahmoradi@znu.ac.ir

A b s t r a c t: The objectives of this study were comparison of Heatsynch (H) and Selectsynch (S) synchronization methods as well as GnRH and hCG administration on 5th day after artificial insemination (AI), on plasma progesterone concentration, pregnancy rate (PR), conception rate (CR), and loss in high producing dairy cows. A total of 186 Holstein lactating cows at 35 ± 2 days postpartum were randomly assigned from a commercial herd. Cows received an injection of GnRH, followed 7 days later by PGF2α. Cows in the H treatment group received an injection of estradiol benzoate (EB) 24 hour after the last PGF2α. Following the synchronization of estrus and AI, cows were injected with either GnRH, hCG or saline on days 5 after AI. Blood sampling were conducted once between days 14 and 23 after AI. Pregnancy diagnoses were performed on days 45 and 90 after AI by rectal palpation. Detected in estrus (AI applied cows) and PR was higher for cows in the H treatment group than those in S treatment group. AI applied cows were 92.19 vs. 39.34% ($P<0.0001$), PR at 45 days were 39.68 vs. 20.66%, respectively ($P<0.006$). Progesterone levels on day 14 after insemination showed no significant difference between treatments but progesterone levels in pregnant and non pregnant cows 23 days after insemination, respectively, 11.43 and 1.43 ng/ml and the difference was significant ($P<0.0001$). GnRH or hCG treated cows 5 days after AI showed higher plasma progesterone level at 14th following AI compared to sub control group ($P<0.05$). Moreover, although the different was not significant, CR at 45 day after AI were found as 62.07% in GnRH, 48.39% in hCG, and 37.78 in sub control group respectively.

Key words: Holstein; Reproduction; Progesterone; Estradiol

1.1-GSCB–02

MUZZLE DERMATOGLYPHICS OF FREISIAN AND ITS APPLICABILITY IN PREDICTING THE MAJOR MILK CONTENTS

N. N. Al-Anbari[1], Anmar Owda Tahir Al Danainawy[2]

[1]Department of Animal Res./ College of Agriculture / Univ. of Baghdad, Iraq
[2]Department of Animal Res./ College of Agriculture / Univ. of Baghdad, Iraq
[1]nasr_noori@yahoo.com //[2]tiger41175@yahoo.com

A b s t r a c t: A study included 70 Freisian cows was conducted at the Nasr Dairy Cattle Station, United Company for Animal Resources Ltd., Al-Soueira (50 km south of Baghdad) in 2007. Seventy primiparous cows were chosen randomly from the herd. The photograph of the muzzle of all cows was used to identify the different shapes of dermatoglyphics on the surface of muzzle (simple arch, fork, enclosure, islands and short ridges) and to measure the muzzle width. The aim of this research was to analyze the relationship between the dermatoglyphics and major milk contents (fat, protein and lactose). Regression coefficient of milk contents on muzzle dermatoglyphics was estimated by using SAS program to get prediction equations. Results revealed that most dermatoglyphics could be good predictors of milk contents, particularly enclosures which had highest (R^2) compared with others.

Key words: Freisian; dermatoglyphics; prediction equation; milk contents.

1.1-GSCB–03

THE COMPARISON OF SOME REPRODUCTIVE TRAITS OF ANATOLIAN AND F1 CROSSBRED (ANATOLIAN × ITALIAN) BUFFALO UNDER VILLAGE CONDITIONS IN TURKEY

Özel Şekerden

Mustafa Kemal University, Faculty of Agriculture, Department of Animal Science, Antakya, Turkey
sekerden@mku.edu.tr

A b s t r a c t: This study compared reproductive traits of Anatolian and Anatolian x Italian F1 crossbred buffaloes in Ilıkpınar Village of Kırıkhan District of Hatay Province, Turkey. Previous studies of the same genotype compared growth characteristics (Şekerden, 2010), and milk yield and somatic cell numbers in milk (Şekerden, 2011); and this present study has dealt with some reproductive traits.

The study material involves various breeding records of Anatolian and Anatolian x Italian crossbred female buffaloes. The buffalos in various lactation orders were from two units representing buffalo herds of Ilıkpınar Village. The records cover periods: 2001–2011 and 2003–2011, respectively, for Anatolian and crossbred buffaloes. The numbers of Anatolian and F1 crossbred buffaloes in terms of trait and genotype were respectively 12 and 10 for first calving age; 87 and 21 for calving interval; and 20 and 5 for gestation period.

The effects of genotype and calving year on examined features were determined by GLM variance analysis and mean values were calculated using SPSS Programme.

It was concluded that there was no significant difference between Anatolian and Anatolian x Italian F1 crossbreeds in terms of the examined reproductive traits.

Key words: Buffalo; Anatolian; Italian; crossbred; reproductive traits

1.1-GSCB–04

EVALUATING THE CORRELATION BETWEEN BODY CONDITION AND FOOD RATION IN COWS DURING PUERPERAL PERIOD

Ilir Dova, Bujar Mane

Universiteti Bujqesor, Fakulteti i Mjeksise Veterinare. Tirane, Albania
dova_ilir@yahoo.com

A b s t r a c t: Estimating the body condition of cows, especially during the puerperal period is of great interest in the field of milk production, reproduction and prevention of different pathologies. 30 cows were taken from the farms of, Ndroq, Kashar and Lushnje, in 4 different physiological stages (2 weeks before calving, 2 weeks after calving, 1 month after calving and 2 months after calving) in order to study the impact of nutrition on the body condition of cows.

The rating of body conditions of cows was carried out based on the 9 - degree - system by Herd, D. B. Considering all the studied economies the body condition of cows resulted to be lower than the optimal required condition and it decreased gradually in the periods of after calving in comparison with the before calving.

According to the obtained results was found that the body condition presents correlative connections statistically verified with the compounds of food rations. The high contents of cellulose impacts negatively in their body condition, especially in the period after calving ($r = –0.76$). The impact of proteins on the food ration in the level body condition is verified statistically in the period 2 weeks before calving ($r = 0.54$). The level of starch in food ration has positive connections with the body condition of cows all periods.

This correlation is connected with two specific factors, the decrease of food consumption that characterizes the period of after birth and the endogenous mobilization of the substances from the tissue to confront the different substances that are extracted with milk.

Key words: body condition; before calving; after calving; cellulose; proteins; starch

1.1-GSCB–05

RELATIONSHIPS BETWEEN METHOD OF MANURE REMOVAL AND SOME REPRODUCTIVE PROBLEMS IN HOLSTEIN COWS

Nurcan Karslioglu Kara[1], Aşkın Galiç[2]

[1]Department of Animal Science, Faculty of Agriculture, Uludag University, Bursa, Turkey
[2]Department of Animal Science, Faculty of Agriculture, Akdeniz University, Antalya, Turkey
galic@akdeniz.edu.tr

A b s t r a c t: This study was carried out to determine the relationships between method of manure removal and clinical mastitis, dystocia, retained placenta and repeat breeding, which are some of the main problems of cattle rearing. 709 cows that were housed total of 37 dairy herds were examined and for each cow the following data were collected: dystocia (yes / no), retained placenta (yes / no), clinical mastitis (yes / no) and repeat breeding (yes / no). 594 cows (84%) were housed in the herds in which manure was removed manually, while the others have automatic manure scrapers. From the results, it was seen that prevalence of mastitis, dystocia and repeat breeding were dependent on method of removal.

Key words: manure scraper; hygiene; reproductive problems; cattle

1.1-GSCB–06

IMPACT OF MANAGEMENT SYSTEM AND AGE ON THE PRESENCE OF BOVINE BABESIOSIS OF NORTHWEST ALBNANIA

Pëllumb Zalla, Egon Andoni, Vasilika Dini, Elenica Dimco, Kastriot Bejlegu

Faculty of Veterinary Medicine, Agricultural University of Tirana, Tiranë, Albania
p_zalla@yahoo.com

A b s t r a c t: Babesiosa is a zoonotic intraeritrocitare parasitic disease caused by parasitic protozoa of the Babesia type like Babesia bigemina and Babesia bovis. The study was conducted in the period between Spring and Autumn 2011 during which some 165 cattle were analyzed, and subsequently put into groups based on age and management system. Each and every animal was tested clinically and the blood drawn from the jugular vein was subjected to microscopic examination.

The infection rate was fixed at 3.42% in animals raised in the feedlot-pasture environment and 1.32 % in animals confined to feedlots. There was a significant difference between the two groups standing at $p < 0.05$. From the animals infected with babesiosa 36 % of them proved to be infected with Babesia bigemina and 64 % proved to be infected with a mix of both Babesia bigemina and Babesia bovis.

The prevalence of babesiosa is much higher in the age-group 2–8 yrs with 3.71 % of the number. There was significant difference between the groups at $p < 0.05$.

The level of infection from ticks was at 23% of the cattle. The ticks were identified as belonging to the type that included: Ixodes, Rhipicephalus, Hyaloma, Boophilus, Heamaphisalis dhe Dermacentor.

Key words: cattle; age; management system; infection rate; ticks

1.1-GSCB–07

INCREASING THE LEVEL OF FERTILITY IN COWS BY HORMONAL TREATMENT

Blerta Mehmedi[1], Taulant Kastrati[3], Luigj Turmalaj[2], Klajdi Nallbani[4]

[1]University of Pristine, Faculty of Agriculture and Veterinary,
Str. Boulevard "Bill Clinton" nn. 10000 Pristina, Kosovo.
[2]Agricultural University of Tirana, Veterinary Medicine Faculty, Albania.
[3]DMV, Practical Veterinary, Kosovo
[4]DMV, Representative of Pfizer Company in Albania
blertamehmedi@yahoo.com // turmalajluigj@yahoo.com

A b s t r a c t: Through this study we aimed at assessing the hormonal stimulation in favor of improving fertility in cows. In Kosovo the mostly bred cows are breed Simmental and Holstein. For various reasons, often the level of expression of estrus is limited and its discovery is hard for the farmers. This leads to the extension of service periods and therefore is associated with economic losses in production as well as reproduction. In order to avoid this consequence we did this experiment by hormonal stimulation of estrus (estrus synchronization) as follows. For this study we selected two farms with cows of the breed Holstein (each with 15 heads) where two group, A considered experimental group and B control group. Cows are from age 3-6 years and have approximately same conditions of treatment and management. All cows in the study have had a normal parturition and without infections after calving. Treatment of the group of cows in this experiment was done fixe 60 days after calving as follows. Hormonal treatment involves a combination of hormones progestagen (CIDR) with Prostaglandin (Dinolytic®). The coil stayed 7 days in the vagina when we removed it we injected PGF2 alpha (25 mg Dinoprost). The control group received no special treatment. The study is focused on the degree of estrus expression in percentage, estrus expression in hours after treatment, rate of fertilization with the first artificial insemination and the index of insemination. As for the control group we estimated service period, the rate of fertilization with the first insemination and insemination index. From the data of the study, above indicators for the group of experiment show's that the degree of stimulation and synchronization of estrus was 93.3% (14/15), the average time of estrus performance 64 ± 8 hours and the rate of fertilization by first insemination 71.4% (10/14). Insemination index gives us the result of 1.3 doses of semen spent per pregnant cow. The data for control group gives us the result that service period was 128 ± 14 days, the rate of fertilization with first insemination 52% and insemination index 2.2 doses of semen doses per cow were spent. From the above data we conclude that hormonal stimulation of cows above 60 days after calving significantly improves their reproductive performance.

Key words: stimulation; service periods; estrus; fertilization

1.1-GSCB–08

GENETIC POLYMORPHISMS OF THE BETA-LACTOGLOBULIN AND KAPPA-CASEIN GENES IN HOLSTEIN FRIESIAN BREEDS IN ANTALYA REGION

Emine Şahin, Murat Soner Balcıoğlu, Taki Karslı

Akdeniz University, Faculty of Agriculture, Department of Animal Science
07070, Antalya, Turkey
msoner@akdeniz.edu.tr

A b s t r a c t: The genetic polymorhisms of the beta-lactoglobulin and kappa-casein genes were investigated in 517 cattle of Holstein Friesian breeds in Antalya region of Turkey by using Polymerase Chain Reaction-Restriction Fragment Length Polymorphism methods. In the study, 2 types of alleles A and B and 3 types of genotypes AA, BB and AB for beta-lactoglobulin and kappa-casein were observed by digestion with HaeIII and HinfI restriction enzymes, respectively. The allele frequency of beta-lactoglobulin for B allele (0.56) was higher compared to A allele (0.44). On the other hand, A allele frequency (0.83) of kappa-casein was much higher compared to B allele (0.17) in these breeds. Results of the present study show that genetic polymorphism exists in the Holstein population reared in Antalya region.

Key words: Beta-lactoglobulin; kappa-casein; gene polymorphism; Holstein

1.1-GSCB–09

SOME BIOCHEMICAL BLOOD PARAMETERS OF GATACKO BREED COWS IN EARLY LACTATION

Đorđe Savić, Stoja Jotanović, Marinko Vekić

University of Banja Luka, Faculty of Agriculture,
78000 Banja Luka, Bosnia and Herzegovina
djordjevet@yahoo.com

A b s t r a c t: In this paper are presented values of biochemical blood parameters of seven Gatacko breed cows in early lactation, and their interpretation according to lactational stage and nutrition. Mean concentrations of albumines, globulines and total proteins (40.14 ± 4.88, 52.57 ± 7.76 and 92.57 ± 10.50 g/l, respectively) indicated dehidration and hemoconcentration. High activities of AST and ALT (131.29 ± 28.52 and 73.14 ± 13.50 U/l, respectively) and hyperbilirubinemy ((30.14 ± 6.96 μmol/l) indicated liver damage by presence of liver fluke larvae, potentiated with influence of lactational stage and low nutritive status. Mean values of cholesterole, urea and calcium concentrations (4.32 ± 1.75, 6.36 ± 1.78, and 2.42 ± 0.18 mmol/l, respectively) were in physiological range, but finding of hyperphosphatemia (2.37 ± 0.47 mmol/l) and altered calcium-phosphorus ratio, indicated mineral disbalance in ration. These findings were in accordance with data from our previous research, conducted on same cattle breed.

Key words: Gatacko breed cows; blood; biochemical parameters

1.1-GSCB–10

MAKE A PLAN OF BIOSECURITY ON THE CATTLE FARM

Atanas Nitovski, Milinko Milenković, Bisa Radović, Valentina Milanović, Dragana Grčak, Milovan Grčak

Agriculture Faculty, Leshak, Kosovo and Metohija, Serbia
anitovski@gmail.com

A b s t r a c t: Biosecurity minimizes the introduction of disease into farms, limits the spread of disease already on farms, and reduces the risk of disease being carried between farms. Biosecurity controls transmission of disease-causing agents between animals, from animals to feed and from animals to equipment that may directly or indirectly contact other animals.

An biosecurity program for cow/calf must address the following: isolation of new animals brought to the farm; isolation of sick animals; movement control of people, animals and equipment; and procedures for cleaning and disinfecting facilities.

Therefore, each owner of the animal biosecurity plan should be developed to ensure full implementation of biosecurity measures. This is particularly important when it comes to the big industrial farms raising dairy cows and beef cattle feedlots. For such a large farm, we have created a biosecurity plan that included:

Planning on-farm biosecurity:

– Introduction of new animals to the farm, moving animals within the farm, putting animals on the market.

– Isolation of animals on the farm, if animals are conducted outside the farm at exhibitions and trade shows at least two weeks, and if you introduce new animals to the farm.

– Plan-Treatment of suspected outbreaks. In cooperation with your veterinarian create a biosecurity plan in doubt of an infectious disease.

– Plan the movement of people on the farm.

– Plan of the vehicle on the farm.

– Prevention of animals entering the farm.

– Process with the equipment on the farm.

– Farm management.

Key words: cattle; farm; plan; biosecurity

1.1-GSCB–11

PRELIMINARY DATA ON MILK PRODUCTION AND MILK COMPONENTS OF SIMMENTAL BREED IN ALBANIA

Ylli Biçoku[1], Merita Uruçi[2]

[1]Agricultural University of Tirana, Tirane, Albania
[2]Albanian Dairy and Meat Association (ADAMA), Tirane, Albania
bicokuy@yahoo.com

A b s t r a c t: The Simental bread is spread in our country after 2000, through the importation of heifers and biological material, mainly from Austria and Germany. One of the reasons, for the actual prevalence of this breed is its direction of combined milk-meat, suitable for the conditions of small and medium private farms.

Our study was to analyze the milk production, and the link of this product with key ingredients such as milk fat, protein, and freezing point produced by cows imported from Austria in 2007, and bred on private farms in the Kruja and Durres districts. For the period September 2010–April 2011 was analyzed the milk of 18 in both farms.

The analysis of milk production in the farm of Kruja district in 2007– 2008 (3.800 liter/cow) noticed that we had to do with a herd that produced 50% more milk than average milk production in the country, but with higher potential. Likewise, the yield of these cows for lactation 2010– 2011 was 5.400 liters.

The data of our study for milk fat, protein and freezing point are within the limits of the Albanian Standards and EU Directives, and higher compare with the results taken by other Albanian authors.during the period 1996– 2000. However, the milk fat and protein percentage are lower compare with the results taken in Austria which could be explained with the managment and nutrition conditions that are not in the level of the breed requests. There is not statistically significant relationship between milk production and milk fat at the 95.0% or higher confidence level. The correlation coefficient equals 0.0354184, indicating a relatively weak relationship between the variables; while there is a statistically significant relationship between milk production with protein content and freezing point.

Statistical data processing was done with Statgraphics Centurion XVI.

Key words: breed; milk fat; protein; freezing point; milk production

1.1-GSCB–12

EFFECT OF SEASON ON SUSTAINABILITY OF DAIRY CATTLE PRODUCTION

Hakan Saglam, Hayati Koknaroglu

Suleyman Demirel University, Faculty of Agriculture, Department of Animal Science, Isparta, Turkey, 32260
hayatikoknaroglu@sdu.edu.tr

A b s t r a c t: Purpose of this study was to analyze effect of season on the sustainability of dairy cattle production. In the study energy input/output analysis which is one of the criteria for sustainability is conducted. Study was conducted at a commercial dairy farm, in Burdur Tefenni, which specialized only in dairying and had 175 heads lactating cow during a production year which covered December 15, 2010 through December 15, 2011. At the first visit to the farm a file that recorded milk production for each cow and number of lactating cows was formed and these records were recorded for everyday. Since the purpose of the study was to compare sustainability of dairy cattle production in terms of season, seasons were classified as winter (December to February), Spring (March to May), Summer (June to August) and Autumn (September to November). Cultural energy used for feed for cows was calculated by multiplying each ingredient with corresponding values of ingredients from literature. Transportation energy was also included in the analysis. Total cultural energy expended was similar for winter and spring, and it was higher from that of summer and autumn ($P<0.05$). Cultural energy expended for feed constituted more than half of the total cultural energy and was higher for winter and spring ($P<0.05$). Cultural energy expended per kg milk and energy efficiency for protein were different for each season and were lowest for summer followed by winter, spring and autumn ($P<0.05$). Energy use efficiency differed for each season and was best for summer followed by winter, spring and autumn ($P<0.05$). As a result, cultural energy use efficiency differed among seasons and in terms of sustainability this should be considered.

Key words: dairy cattle; season; sustainability; cultural energy

1.1-GSCB–13

PERFORMANCE OF HOLSTEIN MALE AND FEMALE CALVES GROWN UNDER MEDITERRANEAN WINTER CLIMATE CONDITIONS

Yalcin Bozkurt

Suleyman Demirel University, Faculty of Agriculture, Department of Animal Science, Isparta, Turkey, 32260
yalcinbozkurt@sdu.edu.tr

A b s t r a c t: The aim of the present study was to compare performance of 12 Holstein female and 11 male calves, (23 in total) grown under Mediterranean winter climate conditions. In this experiment, 4-6 mounts old animals were used with an initial weight of 148 and 123 kg Holstein males and females respectively. The experiment lasted for 4 months and the mean final weights of males and females were 270 and 230 kg; mean total weight gains 121 and 106 kg and finally daily live weight gains of 1.011 and 0.885 kg respectively. The differences in final weights, total weight gains and daily live weight gains between Holstein males and female calves were statistically significant ($P<0.05$). In conclusion, Holstein male calves performed better than the females of the same breed in indoor production systems grown under the Mediterranean climate conditions.

Key words: Holstein; indoor breeding; performance; Mediterranean

1.1-GSCB–14

PRELEMINARY STUDY ABOUT USE OF PROBIOTIC BACTERIA TO PREVENT INFECTIONS IN DAIRY COWS

Fejzo Selami[1], Etleva Delia[2]

[1]Departament of Vterinary Public Health, Faculty of Veterinary Medicine, Agricultural University of Tirana, Albania
[2]Departament of Animal Reproduction, Faculty of Agricultural, Agriculture University of Tirana, Albania
selami.fejzo@gmail.com

A b s t r a c t: Uterine infection as like as known metritis included the inflammation of utureni mucose which caused from diffrent pathogen bacteria. Uterine infection represent very important problem for milk production, as likeas with decreased reproduction ability in dairy cows

The goal of this scientific research is to investigated application and utility of novel technolologies such as probitic bacteria and lipopolysacharide immunoeaching techniques against uterine infection in dairy cows. More specifically we are proposing: the possibility to used probiotc bacteria to prevention and treatment uterine infection in dairy cows.

The probiotic strains will to be used throught intra vaginal application. The probiotic strains that will be applicated will to be commensal from lactic acid bacteria those havae been produced from vaginal health heifer microbota.

Twenty pregnant Holstein cows will to be randomly assigned to tow treatment groups based on their date of calving. Ten cows will be treated with probiotic (lactic acid bacteria) at 10 to the 9 and 10 to the 12 cfu/cow 1 time a week 2 week before calving and 4 week after calving. The other group of 10 cows will serve as control gropup and will be treated with carrier alone. Uterine lochia and vaginal mucus samples will be collected once a week before during and after treatment to amount of endotoxine, and the cell counts of the probiotic acid lactic bacteria. Samples will be collected 2 week before, during calving and 8 week after calving. Blood samples will be collected on the same sampling days as for vaginal mucus and lochia and plasma samples will be stored immediately after seperation at -80 0C for later analyses. Plasma samples also will be monitored for concentration of progesterone.

Kew-words: probiotic; progesterone; samples; cow; metritis

1.2. GSSG

1. Генетика и селекција
Genetics and Selection

Овчарство и козарство
Sheep and Goat Breeding

1.2-GSSG-01

INFLUENCE OF ALTITUDE ON HEMATOLOGICAL PARAMETERS OF BLOOD IN SHEEP

Vasilika Dini, Pellumb Zalla, Jani Mavromati, Esmeralda Sotiri, Alfred Çaushi

Faculty of Veterinary Medicine, Agricultural University of Tirana, Albania
lika_dini@yahoo.com

A b s t r a c t: The study was conducted in two groups of sheep of the same age and of the same breed. Group of sheep in Tirana (average altitude 100 m) was raised in the stable system, while the other group in Kruja (average altitude 500 m) was raised in the pasture system. Blood tests carried out in two different seasons, in spring and in autumn, showed that the hemoglobin concentration was lower in the sheep of Tirana and higher in those of Kruja (56.91 g/L versus 105.54 g/L) P<0001). Higher content of hemoglobin was observed in sheep breed in the pasture system, versus those breed in stable (102.55 g/L versus 75.70 g/L, P<0001). The level of hematocrit was higher in sheep of Kruja than those of Tirana (12.37 versus 12.34). The highest number of leucocytes in sheep resulted in Kruja (8.34 g/L P<0001). In the spring it was (8.97 g/L versus 6.47g/L) in autumn. The eosinophiles highest percentage was found in the sheep of Tirana (9.26 P<0.05).

Key words: hematological parameter; altitude; blood, sheep

1.2-GSSG-02

ANNUAL CHANGE OF THE HEMATOLOGICAL PARAMETERS IN WHITE GOATS

Hüseyin Polat[1], Erkan Pehlivan[2], Gürsel Dellal[2]

[1]Aksaray University, Faculty of Art and Science, Department of Biology
06110 Ankara, Turkey
[2]Ankara University, Agricultural Faculty, Department of Animal Science
06110 Ankara, Turkey
gdellal@agri.ankara.edu.tr

A b s t r a c t: This study researches the change of hematological parameters (18 parameters) in White goats (n: 5, age 1.5; n: 5, age 2.5) during a period of one year (from December to November). As a result of the study, the changes in hematological parameters of between the age groups are statistically insignificant. The same study, the changes of all the hematological parameters with respect to the months are determined to be statistically significant ($P < 0.01$). It can be said that changing environmental conditions between months have an effect on the differences in hematological parameters.

Key words: white goat; hematological parameter; season

1.2-GSSG-03

TRANS-CERVICAL ARTIFICIAL INSEMINATION İN EWES DURING OUT OF BREEDING SEASON

Mina Rashidi, Fatin Cedden

Ankara University, Faculty of Agriculture, Department of Animal Science,
06110 Ankara, Turkey
cedden@agri.ankara.edu.tr

A b s t r a c t: The aim of this study was to determine the effect of trans-cervical insemination with frozen thawed semen in synchronized ewes during out of breeding season. A total of 100 multiparious ewes (crossbred of Akkaraman, Chios, Border Leicester, Lincoln and Ile de France) kept in Research and Application Farm of Ankara University, Faculty of Agriculture were used. Estrus synchronization was performed with progestagen-impregnated vaginal sponges for 14-16 days then, 750 IU pregnant mare serum gonadotrophin (PMSG) per ewe was injected at the time of sponge removal. Ewes were artificially inseminated (AI) with frozen semen after 55 hours following PMSG administration. In addition, each of ewes has received 50 mg of a PGE1 analogue (Misoprostol) intra-cervically 4 hours before AI. Cervix dilatation was observed almost in all ewes received Misoprostol. Lambing, infertility and fecundity rates were found as 44.87%, 55.12% and 91.02% in natural-mated group and 68.18%, 31.81% and 109.09% in Misoprostol group, respectively. Fertility rate was found significantly higher (P = 0.05) in Misoprostol-treated group compared to control group. The results indicated that a reasonable lambing and pregnancy rates can be obtained in estrus synchronized and trans-cervically inseminated ewes after Misoprostol treatment.

Key words: seep; estrus synchronization; prostaglandin E1; trans-cervical insemination

1.2-GSSG-04

PREDİCTİON EQUATİONS FOR ESTİMATİNG 150 DAYS MİLK YİELD FROM PART LACTATİON YİELDS İN TURKİSH AWASSİ SHEEP

Seyrani Koncagül[1], Halit Deniz Sireli[2], Nihat Tekel[2], Mehmet Emin Vural[3], Ahmet Karataş[3], Nalan Akça[3]

[1]Department of Animal Science, Faculty of Agriculture, University of Harran, Sanliurfa-63200, Turkey
[2]Department of Animal Science, Faculty of Agriculture, University of Dicle, Diyarbakir-21100, Turkey
[3]GAP International Agricultural Research and Training Center, Diyarbakir-21120, Turkey
m_seyrani_n@yahoo.com

A b s t r a c t: This study was conducted to develop the prediction equations for 150 days milk yield on the cumulative part lactation milk yield records of Awassi sheep in the Southeast region of Turkey. In the study, total of 145 sheep lambed during the 2007–2008 lambing year. Among the single monthly yields, the 3rd month (R2 = 0.836) was the best for 150 days prediction followed by 2nd and 4th month (R2 = 0.756 and 0.659, respectively). Among the cumulative monthly yields, the TMY120 (R2 = 0.982) was the best for 150 days prediction followed by TMY90, TMY60 and TMY30 (R2 = 0.926, 0.797 and 0.659, respectively). Phenotypic correlation was the highest between the LSV150 and TMY120 (r = 0.991) followen by TMY90, TMY60 and TMY30 (0.962, 0.893 and 0.775, respectively). It was concluded that the total milk yield of the first three month after lambing could accuratly be used to predict the total lactation milk yield of Awassi sheep if a lactation has to be ended after 90 days after lambing.

Key words: Turkish Awassi sheep; part lactation yields; prediction

1.2-GSSG-05

VARIOUS NON-GENETIC FACTORS AFFECTING BIRTH WEIGHT OF GOAT KIDS

Tsvetomira Hristova, Svetoslava Stoycheva, Penko Zunev, Tsonko Maslev

Institute of Mountain Stockbreeding and Agriculture,
5600 Troyan, Bulgaria
cvetomira_16@abv.bg

A b s t r a c t: The aim of the study was to determine paragenetic factors and effect of environmental (year) on body mass of goat kids at birth.

The goats included in this research were representatives of three breed groups – group A (Bulgarian White Dairy goat), group B (Bulgarian White Dairy goat+Toggenburg) and group C (Bulgarian White Dairy+Anglo-Nubian).

Average body mass at birth of male kids were heavier than females and the difference is not statistically significant (P> 0.05).

The singles were heavier than twins and triplet kids and the difference is statistically significant (P< 0.05).

Key words: goat kids; sex of kids; birth weight; non-genetic factors

1.2-GSSG-06

THE HAEMATOLOGICAL PROFILE IN THE BREED OF GOATS NATIVE TO MATI AREA BASED ON THE MANAGEMENT SYSTEM AND SEX PARAMETERS

Pëllumb Zalla, Jeta Abeshi, Vasilika Dini, Egon Andoni, Kastriot Bejlegu, Sokol Duro

Faculty of Veterinary Medicine, Agricultural University of Tirana, Tirana, Albania
p_zalla@yahoo.com

A b s t r a c t: The study included examination of 100 goats broken into groups according to their management system and sex. The blood was drawn from the jugular vein and the blood indicators such as red blood cell (RBC), white blood cell (WBC), neutrophil (NEU), lymphocyte (LYM), monocyte (MONO), eosinophil (EOS), and basophile (BASO) counts, and haemoglobin (Hb), packed cell volume percent (PCV), mean corpuscular volume (MCV), mean corpuscular haemoglobin (MCH), mean corpuscular haemoglobin concentration (MCHC) were recorded. The statistical analysis was conducted by means of the SPSS 16.0. test.

Results indicated that the management system and sex had an influence on the number of erythrocytes, PCV, Haemoglobin ($P < 0.05$). Leukocytes, eosinophils and MCH were found to be influenced from the management system ($P < 0.05$), while sex was found to have an influence on MCHC ($P < 0.05$). In addition, other haematological indicators were not statistically significant. The values determined in this study should be considered to act as reference values for the goat native to Mati area and they might be further incorporated to monitor the health and diagnose of other diseases likely to affect them.

Key words: goat: management system; sex; blood; haematological parameters

1.2-GSSG-07

PROGRAMMED REPRODUCTION IN SHEEP OUTSIDE MATING SEASON

Taulant Kastrati[1], Blerta Mehmedi[2], Luigj Turmalaj[3]

[1]MSC, Practical Veterinary, Kosovo.
[2]University of Tirana, Veterinary Medicine Faculty, Albania.
[3]University of Pristine, Faculty of Agriculture and Veterinary,
Str. Boulevard "Bill Clinton" nn. 10000 Pristina, Kosovo.
kastratitaulant@yahoo.com // turmalajluigj@yahoo.com. // *blertamehmedi@yahoo.com*

A b s t r a c t: The ewes follow seasonal reproductive pattern what in the climate conditions of Kosovo means that the sexual activity is manifested from Jun to August.

We assessed the efficiency of two hormonal protocols for the oestrus synchronization in ewes out of sexual season (during March-April 2012). For this reason two experimental groups, each comprised of 50 Sharr breed ewes, are formed. The both groups had the same breeding and physiological status (all are over 60 days after parturition) as well as management conditions

The treatment for the first group was comprised of progestagen vaginal sponge insertion (Fluor Geston Acetate, 40 mg, Intervet®) for 14 days and the 500 IU of eCG (equine Chorionic Gonadotropin) Foligon (Intervet®), i/m were applied at the time of vaginal sponge removal.

The second group followed the similar protocol, but were additionally treated with 0.1 mg/ewe gonadotropin releasing hormone (GnRH; Fertagyl, Intervet®) 36h after the eCG application. The oestrus was detected by presentation of the ewes to ram 48h after vaginal device was removed. The presented ewes were mated twice in the interval of 12 hours. From the data of the study we have the rate that induced oestrus for the both groups was 94 % and 96 % respectively (P>0.05). We believe that combining hormonal treatment following an accurate methodology delivers very good results in inducing and synchronizing the estrus out of mating season in sheep

Key words: oestrus detection; mated; out of season; oestrus synchronization

1.2-GSSG-08

POTENTIALS AND PRESENCE OF SHEEP BREEDING AND PRODUCTS IN TURKEY

Halit Deniz Şireli[1], Seyrani Koncagül[2], Muhittin Tutkun[1]

[1]Department of Animal Science, Faculty of Agriculture, University of Dicle, Diyarbakir – 21100, Turkey
[2]Department of Animal Science, Faculty of Agriculture, University of Harran, Sanliurfa-63200, Turkey
hdsireli@gmail.com

A b s t r a c t: In this study, it was intended to present general information about the products status, breeding systems and to propose recommendation for improvement of the potentials about sheep breeding. Based on the agricultural statistics by FAO, there is a important potential in terms of sheep breeding, the number of animals and the production value. According to 2010 figures, 2.1% of the world sheep constitute is in Turkey with the presence of 21.8 million sheep. As a result, over the years, based on the continuous decrease in the presence of sheep in Turkey, there is a decrease of 10% sheep over the previous year in 2010. In 2010, there is an increase of 10% in terms of sheep milk, a decrease of 9.2% sheep and goat meat and a decrease of 27% in terms of wool production comparing to previous year.

Key words: Turkey; sheep product; sheep breeding

1.2-GSSG-09

POTENTIALS AND PRESENCE OF GOAT BREEDING AND PRODUCTS IN TURKEY

Halıt Deniz Şireli[1], Seyrani Koncagül[2], Muhittin Tutkun[1]

[1]Department of Animal Science, Faculty of Agriculture, University of Dicle, Diyarbakir 21100, Turkey
[2]Department of Animal Science, Faculty of Agriculture, University of Harran, Sanliurfa 63200, Turkey
hdsireli@gmail.com

A b s t r a c t: The aim of this study was to give general information about the products status, breeding systems and to propose recommendation to improve the potentials about goat breeding. For this purpose, FAO agricultural statistics is presented by evaluating data obtained. Turkey has significant potential in terms of small ruminant breeding, the number of animals and the production value. According to 2010 figures, 0.5% of the world goats' constitute is in Turkey with the presence of 5.1 million goats. As a result, over the years, based on the continuous decrease in the presence of goat in Turkey, there is a decrease of 9% goat over the previous year in 2010. In 2010, there is an increase of 30% in terms of goat milk and decrease of 9.2% goat and sheep meat comparing to previous year.

Key words: Turkey; goat product; goat breeding

1.2-GSSG-10

THE INFLUENCE OF HORMONE-VITAMINE-MINERAL TREATMENT ON WÜRTTEMBERG EWES REPRODUCTIVE EFFICIENCY IN DEEP OFF-SEASON

Ratko Mijatović[1], Stoja Jotanović[2], Marinko Vekić[2], Đorđe Savić[2], Mustafa Podžo[3], Blagoje Stančić[4]

[1]Veterinary ambulance,
Knjaza Miloša 23, Banja Luka 78000, Bosnia and Herzegovina
[2]Faculty of Agriculture, University of Banja Luka,
Bulevar Petra Bojovića 1a, Banja Luka 78000, Bosnia and Herzegovina
[3]Veterinary Faculty, University of Sarajevo,
Zmaja od Bosne 90, Sarajevo 71000, Bosnia and Herzegovina
[4]Faculty of Agriculture, University of Novi Sad,
Trg Dositeja Obradovića 8, Novi Sad 21000, Serbia
stojaj@yahoo.com

A b s t r a c t: Aim of study was to investigate the influence of hormone-vitamine-mineral treatment on reproductive efficiency of Württemberg ewes in deep off-season. Experimental and control group consisted of 35 ewes each. Housing conditions, diet, hormonal treatment and insemination were identical for both groups. The difference between the experimental and control group was in the use of vitamine-mineral treatment. Ewes were treated with progestagens (30 mg FGA), using intravaginal sponges for 12 days. On day of sponge removal, all ewes were treated with 700 IU eCG. On the day of first insemination ewes were treated with 250 IU hCG. Insemination was performed twice with freshly diluted sperm. Experimental group had fertility of 94.29%, fecundity of 137.14% and prolificacy of 145.45%. In control group these values were 70.59%, 105.78% and 150.00%, respectively. Using the described hormonal treatment, estrus can be successfully induced and synchronized in deep off-season. With applying additional vitamine-mineral treatment reproductive efficiency can be improved, compared to the hormonal treatment only.

Key words: ewe, estrus; hormone; vitamine-mineral treatment; reproductive efficiency

1.2-GSSG-11

AGE INFLUENCE ON REPRODUCTIVE INDICATORS OF SANSKA GOAT BREED

Cvijan Mekić[1], Milan P. Petrović[2], Predrag Perišić[1], Zorica Novaković[3]

[1]University of Belgrade, Faculty of Agriculture, Zemun, Serbia
[2]Institute for Animal Husbandry. Belgrade–Zemun, Serbia,
[3]Ministry of Agriculture, Trade, Forestry and Water management of Republic of Serbia, Belgrade, Serbia
cvijanm@agrif.bg.ac.rs

A b s t r a c t: The reproductive age indicators, number of gestations influence on reproductive indicators has been discussed in this paper.

Average length of the first four gestations was 153 days, with variations from 139 to 168 days. Determined differences in gestation length between I and III gestation of 1.94 days and between I and IV gestation of 1.88 days were statistically significant (P<0.05).

Difference in length of gestation in terms of Singles to Gemini aspect was 0,92 days in favor of Singles and was not statistically (P>0.05).

Fertility intensity was at average 362.90 days.

Goat fertility depending on kidding order I, II, III and IV, was at average 161.95 : 156,80: 166.09 : 155.10 %.

Kid mortality rate from birth till end of weaning period for first kidding was 12.05%, second 10.84%; 14.43% for third and 15.78% for fourth kidding.

Mortality of kids from first till fourth kidding in period from birth till end of weaning period was at average 13.27%.

Body weight of kids at birth was at average for Singles 3.37 kg and for Gemini's 2.54 kg. Difference in body weight at birth between Singles and Gemini's of 0.83 kg or 32.67% in favor of singles was statistically significant (P<0.05).

Based on calculated results in this research we can say that achieved productive results are below expected genetic predispositions for breed and they can be connected to bad breeding conditions.

Key words: Sanska breed; fertility; body weight at birth; mortality

1.2-GSSG-12

BODY GROWTH OF GOAT KIDS IN ORGANIC BREEDING BREEDING

Zvonko Antunović, Josip Novoselec, Željka Klir

Faculty of Agriculture in Osijek, Department of Animal Science,
P. Svačića 1 d, 31000 Osijek, Croatia
jnovoselec@suncokret.pfos.hr

A b s t r a c t: The aim of this research was to determine the growth and development of lambs from organic breeding during the period of suckling and fattening. The research was conducted on organic farms with 15 lambs French Alpine breed, during the suckling period (from kidding to 75 days) and the beginning of the fattening period (during the first 20th day of fattening). Lambs were weighed at birth, 15, 45 and 75 days in the period of suckling, when weaning followed, and at the age of 95 days of fattening. Kids were fed a mixture of concentrated feed (50% barley, 30% corn, 10% wheat and 10% sunflower meal) and alfalfa hay ad libitum, while during the period of suckling. Kids were suckling ad libitum. Rearing and feeding of kids were in accordance with the Regulations on organic livestock production. Immediately after weighing kids were taken body measurements (height of withers, trunk length, circumference and depth of chest, circumference and leg length and cannon bone circumference), body condition scores and were calculated indices of anamorphosis and body proportions as well as daily gain. Determined the body weight and daily gain of kids in suckling period and the beginning of the fattening period (from 4.39 kg to 15.72 kg respectively, 18.82 kg and 151 g ie 155 g) indicate the satisfied result of feeding and housing in the organic conditions. With increasing the age of kids body weight was growing, as well as daily gain and body condition scores (from 2.53 to 2.89), anamorphosis indices (from 45.00 to 61.87) and body proportions (from 16.71 to 32.96). Determined indicators of growth and development of kids show satisfactory housing conditions in organic breeding.

Key words: goat kids; body growth; organic breeding.

1.2-GSSG-13

INFLUENCE OF THE BREED ON THE GAIN AND SLAUGHTER QUALITY OF THE GOAT KIDS MEAT

Elena Joševska, Mitre Stojanovski, Nikola Kozarovski

University „St. Kliment Ohridski“, Faculty of Biotechnical sciences,
Partizanska, b.b.7000, Bitola, Macedonia
elena.josevska@uklo.edu.mk

A b s t r a c t: The aim of this investigation was to determine the gain and slaughter quality of the goat kids of the domestic Balkan goat and its crossbreeds with alpine breed.

All male goat kids (from domestic Balkan breed and F1 crossbreeds between domestic Balkan breed and Alpine breed) were fed and maintained in the same conditions. After the slaughter, the measurements of each carcass, were made. The results show significant differences in birth weight of domestic Balkan breed (3,24 kg) and F1 crossbreeds between domestic Balkan breed and Alpine breed (2,67 kg). Dressing percentage was found lower (51.94%) with pH_1 6.56 and pH_2 5.90 in domestic Balkan goat kids compared to Alpine kids (57.61%) with pH_1 6.40 (pH of hot carcass) and pH_2 5.76 (pH of cold carcass). Muscle tissue in three rib cut of goat kids was 49.46%, fat tissue 17.35% and bones 33.19% in domestic Balkan kids. Muscle tissue from F1 crossbreeds was 55.57%, fat tissue 18.19% and bones 26.54%.

Key words: goat kids; birth weight; carcass yield; meat tissue

1.2-GSSG-14

PHENOTYPIC CHANGES IN FAT WITH SELECTION IN LORI-BAKHTIARI FAT-TAILED SHEEP

Mohammad Ali Talebi, Mahmoud Vatankhah

Department of Animal Science, Agriculture and Natural Resources Research Center, Sharekord, Iran
maitalebi@yahoo.com

A b s t r a c t: The data set used in this study was body weight at 6 months of age (BW6M), fat-tailed weight (EFTW) and ultrasound measure of soft tissue at 12-13th rib, 120 mm from the midline (GR) of 2391 lambs at 6 months of age recorded over a 8-year period (2003 to 2011) from a Lori-Bakhtiari research flock in Chaharmahal and Bakhtiari province, Iran. Flock is managed under semi-migratory or village system. SAS procedures were used for the statistical analysis. Average of BW6M, EFTW and ultrasonic soft tissue depth measured in live lambs (UGR) estimated in the age of six months in lambs were 43.30, 2.73 kg and 7.36 mm, respectively. During the selection program for reduce fat, 4.45 percent of the fat-tailed percentage decreased. Fat-tailed weight per kg of body weight decreased from 78g to 52g in end of program. The phenotypic trends for EFTW and UGR regressed on year of birth in constant weight were -140 g/year and -0.37 mm/year, respectively. The phenotypic trend for BW6M was positive (0.744 kg/year). Fat-tailed weight per kg of body weight decreased 3.63 g/year. Consequently, phenotypic progress is possible for decreasing fat and without decreasing body weight by selection.

Key words: fat; phenotypic trend; Lori-Bakhtiari; sheep

1.2-GSSG-15

IMPORTANCE OF BODY CONDİTİON SCORE IN DAİRY GOATS

Mehmet Koyuncu* Şeniz Öziş Altınçekiç

Uludag University, Faculty of Agriculture, Department of Animal Science, 16059, Görükle, Bursa, Türkiye.
koyuncu@uludag.edu.tr

A b s t r a c t: Routinely scoring the body condition of dairy animals can help detect potential problems that might cause a decrease in milk production. As the production level of a herd increases, body condition scoring becomes more important. A routine program for body condition scoring can help detect potential health problems before they significantly reduce milk production. A herd of goat that is in good body condition will not only produce more, but also will be less susceptible to metabolic disorders, disease, mastitis and reproductive problems.

Key words: dairy goat; body condition score

1.2-GSSG-16

WELFARE GOAT DURİNG TRANSPORT

Şeniz Öziş Altınçekiç, Mehmet Koyuncu

Uludag University Faculty of Agriculture, Department of Animal Science, 16059, Görükle, Bursa, Türkiye
senizozis@gmail.com

A b s t r a c t: Animal welfare is the combination of subjective and objective criterion of the conditions of life for animals, including health and disease, behavior, husbandry and management. Transportation is an important activity of the farming industry and it is a topical controversial area of animal welfare. A high proportion of goats are transported some stage in their lives, sometimes to places where food is more readily available, sometimes to a different owner or a different place of keeping and sometimes to slaughter. Transport can potentially be stressfull for goats, as they are subjected to unfamiliar sights, sounds, smells, movements and processes of loading and unloading from the vehicle. Owners should therefore plan the process carefully to ensure that any risks to goat welfare are avoided. The frequency and duration of journeys should be minimised, whilst the conditions during transport should be optimised. The handling, loading, transporting and unloading of animals can have very substantial effects on their welfare. Distress during handling and transport of goats should be minimized. Goats should have an access to fresh water and feed during rest periods on a long haul. Restraining and handling facilities should be free of sharp edges and objects. Goats in lactation require special care to assure comfort, and avoid udder injury and mastitis subsequent to transport. However, to maintain high standards of goat welfare, it is important to train of employees in farm.

Key words: goat; transportation; welfare

1.2-GSSG-17

GENETIC TRENDS WOOL AND BODY WEIGHT TRAITS IN LORI-BAKHTIARI SHEEP

Mohammad Ali Talebi

Department of Animal Science, Agriculture and Natural Resources Research Center, Sharekord, Iran
maitalebi@yahoo.com

A b s t r a c t: The aim was to estimate the genetic parameters and genetic trends for fleece weight and body weight at the shearing wool. Data and pedigree information of the Lori-Bakhtiari sheep used in this study were collected at the Lori-Bakhtiari sheep breeding station from 1991 to 2011. Flock is managed under semi-migratory or village system. Genetic parameters were estimated using bivariate animal model, and a Restricted Maximum Likelihood (REML) approach. Genetic trends were computed by regressing estimated breeding values on year of birth. Means and standard deviation of lamb fleece weight (LFW), body weight at the first shearing wool (LBW), ewe greasy fleece weight (EFW) and ewe body weight at the shearing wool (EBW) were 0.840 ± .15, 38.18 ± 8.29, 1.88 ± 0.51 and 56.36 ± 7.31 kg, respectively. The direct and maternal heritability for LFW and LBW were 0.24 ± 0.03, 0.13 ± 0.03 and 0.06 ± 0.01 and 0.08 ± 0.02, respectively. The heritability coefficient of (EFW) was 0.56 ± 0.04. The genetic trend for LFW and LBW were 3 and 176 g/year, respectively. Consequently, genetic progress of body weight was not antagonist for wool production.

Key words: Genetic trend; wool; body weight; sheep.

1.2-GSSG-18

INVESTIGATION OF MVAI RESTRICTION SIDE LOCATED ALPHA LACTOALBUMIN GENE IN THREE GOAT BREEDS

Yasemin Öner, Şule Şahin, Cengiz Elmaci

Uludağ University, Faculty of Agriculture, Department of Animal Science, 16059 Görükle, Bursa, Turkey
yaseminoner@yahoo.com

A b s t r a c t: The alpha lactalbumin, which is the one of the major whey protein of ruminant milk, is the less investigated milk protein in spite of its biological and nutritional significance. In this present study Hair, Gökçeada, and Saanen goat breed populations were investigated for the mutation lead to arise a MvaI restriction side in the third exon of alpha lactalbumin gene. As a conclusion two allel and two genotypes were detected at LALBA loci. In all of three goat breeds A1 allel and A1A1 genotype were observed to be predominant.

Key words: alpha lactoalbumin; goat; polymorphism

1.2-GSSG-19

THE EFFECTS OF HEAT STRESS ON PHYSIOLOGICAL TRAITS IN SHEEP

Çağrı Kandemir, Nedim Koşum, Turgay Taşkin

Ege University, Faculty of Agriculture, Department of Animal Science,
35100 Bornova, İzmir, Türkiye
cagri.kandemir@ege.edu.tr

A b s t r a c t: Sheep husbandry in tropical and sub-tropical regions, tend to breed throughout the year, although the sexual activity is restricted to a certain extent to the summer months. In such areas, a high ambient temperature is the major constraint on animal productivity. This effect is aggravated when heat stress is accompanied by high ambient humidity. Exposure of sheep to elevated temperatures results in a decrease of body weight, average daily gain, growth rate and body total solids. The possible mechanisms involved in inducing the biological changes in heat-stressed sheep could have definite applications

Growth in young animals, the increase in live body mass or cell multiplication, is controlled genetically and environmentally. The available nutrients, hormones and enzymes, as well as, elevated ambient temperatures are considered as some of the environmental factors that can influence daily gain. During the early stage of embryonic life, total cell number and placentome size were greatly reduced and cell size only slightly decreased by exposure to warm temperatures, compared to thermo-neutral temperatures. This occurred when examining aspects of placental protein and energy metabolism of pregnant ewes during mid and late gestation. Finally, exposure to high ambient temperature causes impairment of reproductive functions in sheep. The effect of heat is aggravated when heat stress is accompanied with high ambient humidity.

In this paper, the physiological status of sheep productive and reproductive traits as affected by heat stress, are highlighted. Other animals are included where applicable.

Key words: sheep; heat stress; traits

1.2-GSSG-20

ESTİMATİON OF LACTATİON MİLK YİELD OF AWESSİ SHEEP BY USİNG LACTATİON CURVES

Ozgur Koskan, Duygu Ince

Suleyman Demirel University, Faculty of Agriculture
Department of Animal Science, Isparta, Turkey
ozgurkoskan@sdu.edu.tr

A b s t r a c t: The purpose of this study was to determine the lactation milk yield, lactation duration and to investigate some lactation curves models on these characteristics of Awassi sheep raised in Ceylanpınar State Farm. In the research period, 610 lactation records kept in 2002 year were used for milk yield characteristics. The average of lactation milk yield and lactation duration were 290.3 kg and 170.3 days, respectively. Wilmink, Cobby & Le Du, Dave and Nelder lactation models were used. In the first lactation a, b, c coefficients for Wilmink, Cobby &Le Du, Dave and Nelder model were 3059.94 ± 35.68 -14.73 ± 0.29 -4042.26 ± 122.76; 2605.30 ± 29.40 +10.58 ± 0.27 +556.69 ± 19.87; 3018.06 ± 56.33 -19.84 ± 1.24 -0.04 ±0.0063; 0.082 ± 0.0011 +39.37 ± 0.52 -0.36 ± 0.0060, respectively. In the second lactation a, b, c coefficients for Wilmink, Cobby &Le Du, Dave and Nelder model were 2604.61 ± 40.91 -12.38 ± 0.34 -919.67 ± 294.80; 2629 ± 23.98 +12.32 ± 0.19 +398.39 ± 16.07; 3001.34 ± 42.95 -21.83 ± 0.89 -0.06 ±0.0049; 0.102 ± 0.0012 +40.11 ± 0.36 -0.34 ± 0.0038, respectively. In the third lactation a, b, c coefficients for Wilmink, Cobby &Le Du, Dave and Nelder model were 2927.64 ± 47.30 -13.96 ± 0.39 -740.13 ± 364.73; 2905.23 ± 22.29 +13.79 ± 0.16 +363.29 ± 12.57; 3121.36 ± 34.33 -18.65 ± 0.93 -0.03 ±0.0055; 0.09 ± 0.0013 +43.19 ± 0.37 -0.37 ± 0.0043, respectively.

Key words: Awassi; milk yield; dactation duration; lactation curves

1.2-GSSG-21

HISTORICAL, CURRENT AND FUTURE ASPECTS OF ANGORA GOATS

Turgay Akünal

Suleyman Demirel University, Faculty of Agriculture
Department of Animal Science, Isparta, Turkey
turgayakunal@sdu.edu.tr

A b s t r a c t: Angora goat, first seen in Central Asia 200 years ago, is famous for its fiber (mohair). They were brought to Anatolia by Turkish people than spread over the world from Turkey. In recent years Angora goats' population decreased but their mohair yield significantly increased through animal breeding strategies. Most of the population of Angora goats in Turkey is raised especially in Central Turkey. Typically the most pure samples are present in Ankara and these goats are permitted to breed. The population of Angora goats decreased recently in Turkey. There were 1.180.000 Angora goats in 1991 and the number decreased to 158 000 in 2008.. The decrease in number is due to agro-politic strategies. Purpose of this review is to shed some light on Angora goat husbandry, mohair production, reproduction, nutrition and under these information to discuss the ways to increase the number of Angora goats.

Key words: angora goats; mohair; reproduction; Turkey

1.2-GSSG-22

THE DETERMINATION OF ORGANIC LAMB FATTENING PERFORMANCE AND SLAUGHTER CHARACTERISTICS IN THE SOUTH MARMARA CONDITIONS IN TURKEY

Hülya Hanoğlu[1], İbrahim Ak[2], Deniz Soysal[1]

[1]Marmara Livestock Research Institute, Bandırma, Balikesir, Turkey
[2]Prof. Dr., Uludağ University, Faculty of Agriculture, Department of Animal Science, Görükle/Bursa, Turkey
hanogluhulya@hotmail.com

A b s t r a c t: This research was carried out to determine the effects of conventional and organic fattening systems on fattening performance, some slaughter and carcass characteristics of lambs in the South Marmara conditions. Conventional fattening groups were fed with concentrate feed mixtures based on conventional barley as ad-libitum and dry alfalfa hay was given at 100 g/day/head level to lambs. Organic fattening groups were grazed on pasture and fed with concentrate feed mixtures based on organic barley in the barn. Organic barley haylage was offered in the short period of pasture. All the lambs in the groups were slaughtered when the average live weight of the groups reached 35 kg in the experiment. Organic lambs reached the targeted live weight sooner than conventional lambs. The daily average live weight gain during fattening periods of organic lambs (155.26 g) was higher than that of conventional lambs (114.83 g) ($P<0.05$). The daily average concentrate feed consumptions of organic and conventional groups were close to each other during fattening periods. Fattening system had an effect on back fat thickness and back fat thickness of organic lambs was lower than conventional lambs ($P <0.05$).

Key words: organic lamb fattening; conventional lamb fattening; live weight gain; slaughter and carcass characteristics

1.2-GSSG-23

RESULTS OF SEVERAL FACTORS INFLUENCE ON DAILY MILK PRODUCTION IN AWASSI BREED IN MACEDONIA

Nikola Pacinovski[1], Nikola Kozarovski[3], Bone Palaševski[1], Elena Eftimova[1], Nataša Mateva[1], Goce Cilev[4], Jovan Stojković[5] Nikola Adamov[5]

[1]Ss Cyril and Methodius Uneversity in Skopje, Institute of Animal Science, 92a Ilinden blvd, 1000, Skopje, Macedonia
[2]Faculty of Biotechnical Sciences, bb Partizanska str. 7000, Bitola, Macedonia
[3]Veterinary Faculty, Prilepska bb, 7000, Bitola, Macedonia
[4]University of Pristina, Faculty of Agriculture in Kosovska Mitrovica, Serbia
[5] Ss Cyril and Methodius Uneversity in Skopje, Faculty of Veterinaey Medicine, Lazar Pop Trajkov, 1000 Skopje, Mecedonia
npacinovski@yahoo.com

A b s t r a c t: In a total of 170 heads Awassi breed, several production traits were tested during the four production years (2002, 2003, 2004 and 2005).

Total of 1130 lactation controls were realized during the whole period of sheep testing at the age of first to eleventh lactation. All the data were analyzed by multi trait fixed model. The certain factor influence were studied with the F-test, and the differences between LS-assessments of every effect are determined with T-test. The analyses were made by the set of programs SPSS.

Almost all factors (year, lactation, lambing month, month of milk control, milk control number), except fertility, had high significant influence ($P < 0,001$) on daily milk production (morning, noon, evening and total milk, % and amount of fats) in tested sheep population.

Highest daily milk production was determined in sheep in 8th lactation and the lowest at those in 11th lactation. Analogically to this data, the sheep of the same age produced the highest and lowest fat amount, respectively. Determining the lactation influence, we can confirm the fact that Awassi breed keeps the level of high and standard milk production in older age.

A typical lactation curve was determined in tested sheep, the dairy sheep breeds characteristic, that starts with the highest daily lactation during the first milk control, and lowest during the last one.

Key words: Awassi; daily milk production; factors influence; lactation curve

1.3. GSPB

1. Генетика и селекција
Genetics and Selection

Свињарство
Pig Breeding

1.3-GSPB-01

MAKE A PLAN OF THE BIOSECURITY ON THE PIG FARM

Atanas Nitovski, Milenko Milenković, Dragana Grčak, Valentina Milanović, Bisa Radović, Milovan Grčak

Agriculture Faculty, Lešak, University of Kosovska Mitrovica, Kosovo and Metochy, Serbia
anitovski@gmail.com

A b s t r a c t: Biosecurity measures imposed to protect a biological sistem from attak by potentially harmful microorganisms that can reduce the level of health of man and animals. Measures should be used to protect the farming sistem from both external entry pathogens and also internal transfer between diferent part of the farm.Biosecurity enchances animal performance minimiyes disease, reduces medication costs and overall improves quality assurance of the pork chain.

High risk for farm are: vehicles, incoming pigs, physical barieres, visitors, control of rodents and files, water, feed and beeding surces.

Therefore, each owner of the animal biosecurity plan should be developed to ensure full implementation of biosecurity measures. This is particularly important when it comes to the big industrial farms raising sows and fetbreeding. We are make the Plan of biosecurity for one farm with 200 sows and thear pigs. For such a farm, we have created a biosecurity plan that included:

Planning on farm biosecurity:

-Introduction of new animals to the farm, moving animals within the farm, putting animals on the market.

– Isolation of animals on the farm, if animals are conducted outside the farm at exhibitions and trade shows at least two weeks, and if you introduce new animals to the farm.

– Plan-Treatment of suspected outbreaks. In cooperation with your veterinarian create a biosecurity plan in doubt of an infectious disease.

– Plan the movement of people on the farm.

– Plan of the vehicle on the farm.

– Prevention of animals entering the farm.

– Process with the equipment on the farm.

– Organisation of farm management.

Key words: pig farm; biosecurity

1.3-GSPB-02

ANTIMICROBIAL SUSCEPTIBILITY OF *E. COLI* STRAINS ISOLATED FROM PIGLETS

Jadranka Žutić[1*], Oliver Radanović[1], Vladimir Radosavljević[1], Slavco Mrenoski[2], Nikola Pavlović[1], Milenko Žutić[1]

[1]Scientific Veterinary Institute of Serbia, V. Toze 14, 11000 Belgrade, Serbia
[2]Faculty of Veterinary Medicine Skopje
Lazar Pop-Trajkov 5-7, 1000 Skopje, Macedonia
jadranka.zutic@gmail.com

Abstract:The in vitro susceptibilities of 63 isolates of *E.coli* from piglets, were tested with the 10 antimicrobial agents using the disc diffusion method according to CLSI (2008) recommendations.

The samples for the investigations were rectal swabs from piglets with clinical signs of diarrhea or parts small intestine with pathoanatomical changes from piglets that died.

All the samples originated from suckling piglets aged 1-30 days.

E.coli isolates showed highest of resistance to tetracycline (90,47%) and ampicillin (80,95%). Resistance to streptomycin, neomycin, trimethoprim/sulfamethoxazole and gentamicin was established in 71,42%, 66,66%, 61,90% and 57,14% strains of *E.coli*.The lowest percentage of resistance to ceftiofur was established in 6,34% strains.

Antibiogram results reveal a high resistance of isolated strains to the antimicrobials that are often used in veterinary practice. These results have important implications with regards to the spread and persistence of resistance in bacterial populations and to the prudent use of antimicrobial agents.

Key words: pig; *E.coli*; susceptibility; antimicrobial agents

1.4. GSPO

1. Генетика и селекција
Genetics and Selection

Живинарство
Poultry Breeding

1.4-GSPO-01

EFFECTS OF GENOTYPE AND BODY WEIGHT GROUPS ON EGG PRODUCTION IN JAPANESE QUAILS (COTURNIX COTURNIX JAPONICA) BREEDING IN SPRING SEASON IN ANTALYA REGION

Sezai Alkan[1]. Taki Karsli[1], Aşkın Galiç[1], Kemal Karabağ[2]

[1]Akdeniz University Faculty of Agriculture, Department of Animal Science, 07070 Antalya, Turkey
[2]Akdeniz University, Faculty of Agriculture, Department of Department of Agricultural Biotechnology, 07070 Antalya, Turkey
sezaialkan@akdeniz.edu.tr

A b s t r a c t: The study was carried out to examine the effects of genotype and body weight groups on average egg weight, weekly average egg number and weight in Japanese quails (Coturnix coturnix japonica) which reared in spring season in Antalya region. The body weights were classified into six groups in terms of their weights as <=170.0 g, 170.1-210.0 g, 210.1-250.0 g, 250.1-290.0g, 290.1-330.0 and >330.0 g. The egg yield and body weight were recorded during 12 weeks period by weekly. The temperature and humidity values were determined as 14, 90 ± 0,8400C, 77, 69 ± 3,383%; 17, 15 ± 0,8210C, 79, 81 ± 3,305% and 21, 00 ± 0,7550C, 73, 17 ± 3,041% in March, April and May months, respectively. Body and egg weights were weighed by digital balance (0.01 sensitive). Average egg weight, weekly average egg number and weight were significantly affected by body weight groups ($p<0.01$). The highest and lowest average egg weight was found in first (<=170.0 g) and sixth (>330.0 g) group, respectively. Data were analyzed by SPSS program.

Key words: Japanese quail; body weight; egg weight; egg number; spring season

1.4-GSPO-02

SELECTION OF BREEDING ROOSTERS BASED ON THE RESPONSE TO MASSAGE AND EJACULATION

Veselina Sredkova[1], Simona Popova-Ralcheva[1], Evgeni Petkov[2], Vasko Gerzilov[3]

[1]Agricultural Academy, Sofia, Bulgaria
[2]Institute of Animal Science, Kostinbrod, Bulgaria
[3]Agricultural University, Plovdiv, Bulgaria
sredkova@abv.bg

A b s t r a c t: The study comprised 30 roosters of Line H – White Plymouth Rock (Line H) and 30 roosters of Line C of the hybrid combination Redbro (Line C) parents (F0), their sons (F1) and grandsons (F2).

The first study of the roosters for response to massage was carried out at 18 weeks, the second – at 19 and the third – at 20 weeks. The sperm production was studied in the period 24 – 64 weeks with an interval of 4 weeks by the classic massage technique of Burrows and Quinn (1935, 1937).

The body weight of roosters of all ages was also monitored.

The roosters, descending from fathers with high values of the studied indexes, were more active than their parents.

– The increase of the body weight with age did not lead to the decrease of the number of active roosters in terms of ejaculation with the exception of the last period of investigation.

– A genotypic difference was established in terms of response to massage and ejaculation – the birds of Line C were more active in all three studied generations.

Key words: roosters – parents (F0); their sons (F1) and grandsons (F2); quality and quantity of sperm

1.4-GSPO-03

TESTING THE POSSIBILITY OF ZEOLITE APPLICATION ON POULTRY EXPOSED TO THE G2 AFLATOXIN EFFECT

Maslić-Strižak Danka[1], Ljiljana Spalević[1], Radmila Resanović[2]

[1]Veterinary Institute of Serbia, Vojvode Toze 14, Belgrade Serbia
[2]Faculty of Veterinary Medicine, Boulevard JNA 18, Belgrade, Serbia
maslicd@ikomline.net

A b s t r a c t: The presence of toxin producing fungi and mycotoxins in all types of raw materials used for animal feed production enables the appearance of aflatoxin residue in all of the tissues and organs, and especially in the meat, milk and eggs. In order to reduce the aflatoxin concentration in the food and its residue in the victuals of animal origin, various procedures can take place, among which is the application of sillicone mineral adsorbents. Since adsorbents have the possibility to physically link certain chemical components, and they are not themselves resorbed from the intestines, it is possible to prevent the toxin indigestion from the gastrointestinal tract. In the work, the possibility of the zeolite mineral clinoptilolite application with poultry exposed to the effect of G2 aflatoxin was tested. During the experiment on the broiler chickens, aflatoxin G2 intoxication was performed in the amount of 0.1mg per 1kg of bodily mass during 21 days.

After the experiment and the suffocation of animals, the presence of aflatoxin G2 residue in organs and tissues was tested in order to determine the protective effect of modified clinoptilolite.

This work proved that aflatoxin given to the broilers in the amount of 1mg per 1kg of bodily mass during 21 days does not cause disturbances in the state of health of the broiler chickens, but the production results were significantly reduced which are expressed in a statistically significant lower growth. It was also determined that the use of modified clinoptilolite through food prevents the deposition of aflatoxin G2 in the edible organs and tissues of chickens.

Key words: modified clinoptilolite; aflatoxin G2; residue; broiler chickens; growth; intoxication

1.4-GSPO-04

PHARMACOKINETIC PROFILE OF ENTEROBACTERIACEAE STRAINS (*E. COLI* AND *SALMONELLA* SPP) IN ALBANIAN POULTRY FARMS

Shtylla Tana[1], Circella Elena[3], Madio Anna[3], Boci Jonida[2], Çabeli Pranvera[1], Kumbe Ilirian[1], Camarda Antonio[3]

[1]Faculty of Veterinary Medicine, Agriculture University of Tirana, Albania
[2]Veterinary and Food Security Institute, Tirana, Albania
[3]Facultà di Medicina Veterinaria, Università degli studi "Aldo Moro", Bari, Italy
shtylla2003@yahoo.com

A b s t r a c t: A total of 284 Enterobacteriaceae strains (E.coli and Salmonella spp.) isolated from clinically affected poultry were tested for antimicrobial susceptibility toward a panel of 13 antibiotic agents, prelisted by their common use in veterinary practice in Albanian poultry farm. The highest level of antimicrobial resistance was observed for Tetracycline 100%; Furazolidone 100%; Oxytetracycline 98, 1%; Doxycycline 90, 2%; Amoxicillin 94% and Gentamicin 94%. Relevant resistance was detected for fluoroquinolones (Enrofloxacin 76, 9% for E.coli strains and 74, 6% for Salmonella spp. strains), which are elective molecules in poultry colibacillosis and salmonellosis treatments. No evident differences were found between intensive and rural poultry farms originating strains. Multiple antibiotic resistances were expressed by all Enterobacteriaceae tested strains. These data lead to retain possible an incorrect use of antibiotic agents in poultry farm of Albania. In conclusion the spread of multiple antimicrobial resistant strains in poultry flocks provides significant decrease of antibiotic effect with high risks in changing E.coli and Salmonella spp. pathogen profiles and their infection treatment failure.

Key words: poultry enterobacteriacecae strains; antimicrobial resistance; albanian poultry industry; treatment failure

ANNU

2. Исхрана на домашни животни
Animal Nutrition

2-ANNU-01

THE EFFECT OF DIFFERENT PROTEIN SOURCES IN THE DIET ON GOAT PRODUCTION PERFORMANCE DURING FATTENING*

Stojković Jovan[1], Ilić Zoran[1], Cilev Goce[2], Jasović Boban[1], Pacinovski Nikola[3]

[1]University of Pristina, Faculty of Agriculture in Kosovska Mitrovica, Serbia.
[2]University "St Kliment Ohridski" in Bitola, Veterinary Faculty, Bitola, Prilepska, bb, Bitola, Macedonia.
[3]Ss Cyril and Methodius university in Skopje, Institute of Animal Science, 92a Ilinden blvd, 1000, Skopje, Macedonia
jovan.s@jotel.co.rs

A b s t r a c t: This paper presents the results of the effect of different protein sources in the diet on growth intensity and the usage of foods and nutrients for weaned goats during intensive fattening. The experiment was carried out on 60 Balkan kid goats, weaned at 60 days, and divided into 3 groups. The goats were fed with concentrate mixture and alfalfa hay was available at will. We examined the effect of using three mixtures which differed in terms of the percentage of non-degradable protein at the rumen level: 57% (I), 50% (II) and 46% (III), which was achieved by using different protein sources: soy meal (I), sunflower meal (II) and rapeseed meal (III), on goats' production parameters during fattening. Statistical analysis was performed by using Statistica program, version 6, Stat.Soft, Inc. (2003). Goats on the I: II: III diet type realized average daily weight gain: of 0,276:0,250:0,203 kg, respectfully. Conversion of dry matter (kg / kg of weight gain) on analogue treatment was: 3,10:3,35:3,70, of energy (NEM MJ / kg) was: 27,90:30,69:33,17, and of total protein (g/kg) was: 570:597:679.

Key words: kid goats, weight gain, protein source, feed conversion

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2-ANNU-02

COMPARATIVE CHARACTERISTICS OF THE COMPOSITION AND NUTRITIONAL VALUE OF THE FODDER GROWN IN THE CONDITIONS OF MOLDOVA

Larisa Caisin[1], Vasile Harea[2], Vasile Vrancean[1], Tatiana Railean[3]

[1]The State Agrarian University of Moldova
[2]Research and Practical Institute of Biotechnology in Animal Breeding and Veterinary Medicine
[3]Ministry of Agriculture and Food Industry of Moldova
caisinlarisa@mail.ru

A b s t r a c t: The chemical composition and nutritive value of fodder depends on many factors, the most important of which are the conditions for plant growth (climate, soil, fertilizers, agricultural machinery), species, stage of plant development, the way of harvesting, storage conditions.

The aim of the research was to study the differences in the chemical composition of the fodder grown in different zones of the Republic of Moldova, the identification and comparative analysis of their actual nutritional value, analysis and comparison with the data given in specialty literature.

The laboratory studies of the local fodder in Moldova, selected at the farms of the State Enterprise "Moldsuinhibrid" (Orhei) and E.T.S. (Maximovka) revealed differences in chemical composition and general nutritive value that depends on the area of cultivation, as well as in comparison with the data used in calculating the recipes of fodder mixtures and combined fodder for animals and poultry.

Differences in chemical composition and general nutritive value were observed in almost all fodder in the Republic of Moldova, selected from different places, as well as in comparison with the data used in the country to balance the diets of cattle and poultry.

Key words: chemical composition; fodder, nutrition; breeding zone

2-ANNU-03

INFLUENCE OF PRIMIX-ALFASORB ON DIGESTIBILITY OF NUTRIENTS IN GROWING PIGS

Larisa Caisin[1], Ludmila Bivol[1], Vasile Harea[2], Alexei Kovalenko[3]

[1]The State Agrarian University of Moldova
[2]Research and Practical Institute of Biotechnology in Animal Breeding and Veterinary Medicine
[3]Scientific and Production Enterprise "Ariadna"
caisinlarisa@mail.ru

A b s t r a c t: The research was conducted using growing pigs which were divided into four experimental groups. The goal of the digestibility trial was to study the nutritive value of the foods of local origin and the digestibility of nutrients under the influence of the adsorbent Primix-Alfasorb at various levels: 0.2, 0.4 and 0.6 kg/t respectively in the experimental groups EG1, EG2 and EG3.

The obtained results showed that the Primix-Alfasorb had a positive impact on the nutrient digestibility in growing pigs in all the experimental groups compared with the control group.

No significant differences in digestibility coefficients of dry and organic matter were observed. The data on digestibility of nutrients were higher in all the diets for the experimental groups, but the significant effect ($P < 0.05$) was observed in crude fat in EG1. The digestibility coefficient of NFE (nitrogen-free extract) in the experimental groups EG2 and EG3 was higher respectively by 2.04 and 2.06 % than the digestibility coefficient in the control group ($P<0.01$ and $P<0.05$). Only the digestibility of cellulose was lower in the experimental groups compared with the control group, because pigs, especially young animals, digest cellulose worse. There was no significant influence on the animal's live weight.

Key words: digestibility; mixed fodder; breeding gilts; adsorbent

2-ANNU-04

INCLUSION OF PEAS AS PROTEIN SOURCES IN THE DIET OF DAIRY GOATS IN ORGANIC BREEDING

Zvonko Antunović, Josip Novoselec, Željka Klir, Mislav Djidara

Faculty of Agriculture in Osijek, Department of Animal Science,
P. Svačića 1 d, 31000 Osijek, Croatia
zantunovic@pfos.hr

A b s t r a c t: The aim of this paper is to explore the possibility of inclusion grain of peas (Pisum sativum spp sativum) in the rations of lactating dairy goats in organic breeding. The research was conducted with 14 goats, French Alpine breed. Goats were in third lactation, average age 4 years and with regard to feeding divided into two groups. The control group of goats (C) was fed with a mixture of concentrated feed (800g/day) and alfalfa hay ad libitum, while in the experimental group (E) was included peas (15% in the mixture) in exchange for corn. Weighing and taking the body measurements as well as control milking and sampling of goats milk were conducted at the beginning and end of the research (from 70 to 100 lactation days). In goat milk determined content of fat, proteins, lactose, dry matter and urea as well as the number of somatic cells and microorganisms. Inclusion of peas in the food E group of goats led to a positive impact on the indices of physical development and exterior characteristics as well as achieved greater body mass and smaller losses in body weight during lactation, but differences between groups were not significant. In E group compared to C group of goats was found higher amounts of milk, but without significant difference, while milk urea concentration was significantly higher, which was to be expected due to better feed rations. With regard to the achieved better production effects in goats fed with the addition of peas (15% in food), we suggest his inclusion as a protein source in food of goats in lactation from organic breeding.

Key words: pea; goats; organic breeding; production

2-ANNU-05

EFFECTS OF AROMATIC PLANTS ON RUMEN FERMENTATION

Duygu Budak[1], Aydan Yilmaz[2]

[1]Aksaray University, Aksaray Vocational High School, Aksaray, Turkey
[2]Ankara University, Faculty of Agriculture, Department of Animal Science, Ankara, Turkey
budakduygu@hotmail.com

A b s t r a c t: Taking rumen conditions under control has great importance for productivity and animal health. By using aromatic plants it is aimed to provide rumen manipulation for making modifications in the activities of rumen microorganisms, optimizing the nutritional value of the feeds, improving the efficiency of the fermentation. The limitation of use of antibiotics in animal nutrition directed scientists to make studies about the use of alternative antimicrobial substances. For this aim, aromatic plants and volatile oils produced from them have been used. In this review; aromatic plants owning antimicrobial and antioxidant properties and their efficiency mechanisms, chemical compositions, volatile oils and their properties, utilization of aromatic plants in ruminant nutrition and its effects on rumen fermentation were summarized. In general evaluation of the performed researches it was concluded that the antimicrobial property of aromatic plants contributes to the increase of protozoa numbers, utilization of aromatic plants and the volatile oils produced from them by considering their active ingredients and their limited utilization improves the rumen fermentation.

Key words: aromatic plants; rumen fermentation; antimicrobial; antioxidant

2-ANNU-06

THE INFLUENCE OF MINERAL ADSORBENTS ADDED TO DIETS ON THE PRODUCTION PARAMETERS OF BROILERS*

Đorđe. Okanović[1], Dejan Karović[2], Slavko Filipović[1], Vera Radović[2], Tatjana Tasić [1], Natalija Džinić[3], Predrag Ikonić[1]

[1]Institute of Food Technology, University of Novi Sad,
Bulevar cara Lazara 1, 21 000 Novi Sad, Serbia
[2]Agriculture faculty in Čačak, University of Kragujevac,
Cara Dušana 34, 32000 Čačak, Serbia
[3]Faculty of Technology, University of Novi Sad,
Bulevar cara Lazara 1, 21000 Novi Sad, Serbia,
djordje.okanovic@fins.uns.ac.rs

A b s t r a c t: In this work the original results were presented considering the application of the mineral adsorbents in diet of broilers. The aim of these investigations was to determine: if mineral adsorbents,"Minazel" and" Minazel Plus" added into diet for fattening chickens, had influence on fattening performances and slaughtering characteristics.

The examination was done on 400 fattening of Cobb 500 strain, divided into 4 groups, considering the level of already added mineral adsorbent: control group K (100 chickens, without added mineral adsorbent – 0,0%), experimental group O-I (100 chickens, with 0,5% of Minazel), experimental group O-II (100 chickens, with 0,2% of Minazel Plus), experimental group O-III (100 chickens, with 0,3% of Minazel Plus). The feeding experiment lasted for 42 days. Feed and water supply was ad libitum applying floor stocking system.

Because for the reason that increase is important determining element of quality, influence of feeding treatment to this trait was observed. The results of examination show that the broilers fed with the addition of mineral adsorbents, had better production results: less mortality, lower consumption and better feed conversion, higher live weight and chilled carcass, and obtained the greater the mass of high quality carcass parts - drumsticks and breasts. The diferences of the mean values between examined groups were statistical significant ($p<0.01$).

Finaly we claim that the mineral adsorbents added into the diets for broilers resulted in better fattening performances of the broilers.

Key words: broilers; fattening; mineral adsorbents; performances

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2-ANNU-07

LEVEL BETA-CAROTENE AND VITAMIN A IN BLOOD SERUM OF PREGNANT AND HIGHLY LACTATING COWS FED WITH DIFFERENT COMPOSITIONS

Bisa Radović, J. Janjić, Milenko Milenković, Boban Jašović, Atanas Nitovski. Valentina Milanović

Univerzitet u Prištini – Kosovska Mitrovica, Poljoprivredni fakultet, Lešak, Serbia
bisaradovic@yahoo.com

A b s t r a c t: The studies were conducted on the farm of Simmental cows where was formed five groups of 12 cows, in which were tested the concentrations of beta - carotene and vitamin A in blood serum. In the first group were highly pregnant cows, and the other four groups cows from first to fifth months of lactation. The composition of a meal of high pregnant and lactating cows in terms of the types and amounts of certain nutrients were different.

In the obtained average values of beta - carotene in the blood serum of cows between the groups was not statistically significant difference. The lowest value of beta - carotene in relation to other groups, was in the serum of the cows in the first month of lactation (x = 3.39 ± 0.27 mmol/l).

The average concentration of vitamin A was statistically significantly lower for cows in the first month of lactation (x = 76.67 ± 6.39 IU) compared to cows that were in the fourth (x = 112.03 ± 8.76 IU) and fifth month of lactation (x = 118.90 ± 8.29 IU), (p < 0.01), as well as in high-pregnant cows (x = 81.33 ± 3.59 IU) compared to cows in the fifth month of lactation (p < 0.01).

Our research has not confirmed the connection between movement of the concentration of beta - carotene and vitamin A in blood serum tested cows.

Key words: beta-carotene; vitamin A; cows

2-ANNU-08

EFFECTS OF PHYTASE AND DCP SUPPLEMENTATION ON PERFORMANCE, EGG QUALITY, SOME SERUM, TIBIA AND EXCRETA CHARACTERISTICS OF BARLEY BASED PROTEIN DEFICIENT QUAIL DIETS

Nese Nuray Toprak, Aydan Yilmaz

Ankara University, Faculty of Agriculture, Department of Animal Science, Ankara, Turkey
nndede@agri.ankara.edu.tr

A b s t r a c t: This research was conducted to determine the effects of phytase or dicalcium phosphate (DCP) supplementation on performance, egg quality, serum total protein (TP), calcium (Ca) and phosphorus (P) level, tibia ash, Ca and P concentration, excreta ash, Ca and P level of barley based protein deficient quail diets. A total of 270, 10 wk old quails were used. Diets were insufficient in available P and had different crude protein (CP) level (16, 18, 20%). It was made phytase or DCP supplementation on each protein level.

At the end of the study, quails had similar body weight, body weight change and feed conversion ratio although feed consumption was affected by CP level ($P < 0.05$). Egg weight was heaviest in 18, 20 % CP level ($P < 0.05$). Albumen index, Haugh Unit, serum TP and excreta P level ($P < 0.05$) were affected by CP percentages of the diet. Phytase increased serum P concentration ($P < 0.05$). P excretion was lowest in control and phytase groups by 38% ($P < 0.01$).

As a result, CP level of quail diets shouldn't be lower than 18 % and DCP didn't any improvement all of research criteria in the layer period. Phytase can be used in this period if it is economically.

Key words: barley; DCP; phytase; protein; quail

2-ANNU-09

THE INFLUENCE OF FOOD RATION ON THE HEMATOLOGICAL PARAMETERS OF BLOOD IN LAYING HENS

Vasilika Dini, Pellumb Zalla, Esmeralda Sotiri

Faculty of Veterinary Medicine, Agricultural University of Tirana, Titana, Albania
lika_dini@yahoo.com

A b s t r a c t: In the diet of laying hens was experimented addition of Zn element. Zinc was added into drinking water at different levels. The hens were divided into 3 groups. Group I-control, Group II- Zn 200 mg/L, Group III- Zn 400 mg/L of water. Blood samples were obtained from the tibial vein of all hens at the end of the 1st week of treatment and then every week up to the end of the experiment. There was no significant effect of Zn supplementation on hematological parameters, such as: packed cell volume (PCV)%, haemoglobin (Hb), red blood cells (RBC), white blood cells (WBC), total leucocytes count (TLC), erythrocyte sedimentation rate (ESR), coagulation time (CT), mean corpuscular volume (MCV), mean corpuscular haemoglobin concentration (MCHC). Eosinophils, neutrophils, lymphocites, monocytes were not affected by treatment. Zn supplementation presumably stimulated haemopoietic system to improve performance of hens.

Key words: food ration; zinc; hen; hematological parameter; blood

2-ANNU-10

EFFECT OF GLYCEROL SUPPLEMENTED DIET FED DIFFERENT PERIODS ON JAPANESE QUAILS ON CECAL MICROBIOLOGYA

A. Önder Üstündağ[1], Ahmet E. Tüzün[2], Mürsel Özdoğan[1], Gamze Başbülbül Özdemir[3]

[1]Adnan Menderes University Faculty of Agriculture,
Department of Feed and Animal Nutrition,
South Campus, Aydın, Turkey
[2]Adnan Menderes University Koçarlı Vocational School, South Campus,
Aydın, Turkey
[3]Adnan Menderes University Arts&Science Faculty, Department of Biology,
Kepez, Aydın, Turkey
austundag@adu.edu.tr

A b s t r a c t: This study evaluated the effects on the bacterial microflora in the cecum of Japanese quail caused by the addition of crude glycerol to their diet at different age.

In this experiment, 480-day-old Japanese quails were used. Quails were assigned randomly into four dietary groups. The diets containing no glycerol (control diet) and 5% glycerol were used in the experiment. The first group (Group I) was fed with the control diet. Group II between 1–35 day-old, group III between 1–21 day-old, and group IV between 21–35 day-old quails was fed with the diet containing 5% glycerol. At the same time, Group III and Group IV were consumed control diet in 22–35 day-old and 1–20 day-old, respectively. The experiment lasted 35 days. Cecum samples were collected from total of 128 quails (16 female and 16 male in each group) on 21- and 35 day-old quails. The amount of Enterobacteria, coliform, and total bacteria was determined in the cecum.

The groups of Enterobacteria and coliform bacteria in the cecum of 21 day-old females and 35 day-old male quails only showed statistical difference among the groups. On the other hand, it was seen that the numbers of total bacteria of male ($P < 0.01$) and female ($P < 0.05$) quails fed with diet containing 5% glycerol between 1–35 day-old were significant than the control group at 35 day-old.

Keywords: glycerol; quail; bacterial microflora; cecum

2-ANNU-11

INFLUENCE OF THE VARIETY ONTO THE EFNERGY EFFICIENCY OF THE FORAGE WINTERING BROAD BEANS PRODUCTION

Rusinka Petkova[1], Dimitar Pavlov[2]

[1]Agricultural Institute, Stara Zagora, Bulgaria,
[2]Trakia University, Stara Zagora, Bulgaria
rospet23@abv.bg

A b s t r a c t: In order to determine the energy efficiency of the forage wintering braod beans production depending on the variety, adopted is the energy approach, comprising of comparison of the total energy outgo with the amount of energy accumulated in the production and presented in comparable measurement units (kkal, MJ). For this purpose, used are the wintering broad beans productivity results from the agrarian experiment held at the Agricultural Institute, Stara Zagora, Bulgaria.

Studied is the effect of the following West European varietes: Meris Bina, Buldog, Burgon, Meris Bigal, Webo and Trous MS.

Grounded on the study, verified is that the highest energy efficiency factor results from the Webo variety – 7.14 for Gross Energy (GE) and 2.98 for the Net Energy (NE).

Key words: broad beans, productivity, energy efficiency

2-ANNU-12

COMPOSITION AND NUTRITIVE VALUE OF SOME GRAIN LEGUMINOUS FORAGE CROPS FOR THE CONDITIONS OF SOUTH-CENTRAL BULGARIA

Rusinka Petkova[1], Dimitar Pavlov[2]

[1]Agricultural Institute, Stara Zagora, Bulgaria,
[2]Trakia University, Stara Zagora, Bulgaria
rospet23@abv.bg

A b s t r a c t: The prohibition to use carcass meal and other animal protein sources requires their replacement with vegetable sources. Such reserves are annual grain leguminous forage crops.

In order to determine the composition of the seed's nutritional value of new varieties from annual grain leguminous forage crops, average samples were taken from batches of soya bean, wintering broad beans, bitter vetch, lathyrus, vetch and spring peas produced on the experimental field of Agricultural Institute, Stara Zagora, Bulgaria.

These samples are subjected to analysis of the chemical and mineral composition, by applying the Weende method, as well as colorimetric, flame photometric and spectrophotometric methodsarial.The resulting information enriches the information system with data on forage sources produced in the Bulgarian conditions, as well as some new indicators, allowing the establishment of rations for different types and categories of animals.

Key words: soya bean; broad beans; vicia ervilia; lathyrus; vetch; peas; nutritive value; mineral composition

2-ANNU-13

EFFECTS OF MULTIPHASE NUTRITION ON CARCASS TRAITS OF BROILERS AND NITROGEN CONTENT IN FECES

Nataša Tolimir[1], Lidija Perić[2], Niko Milošević[2], Mirjana Đukić-Stojčić[2], Marijana Maslovarić[1], Biljana Miljković[3]

[1]Institute for Science Application in Agriculture,
Bulevar despota Stefana 68 b, Belgrade, Republic of Serbia;
[2]Faculty of Agriculture, Square Dositeja Obradovića 8, Novi Sad, Republic of Serbia,
[3]Institute of Veterinary Medicine of Serbia, Vojvode Toze 14, Belgrade, Republic of Serbia
ntolimir@ipn.co.rs

A b s t r a c t: The study aims to investigate the effect of multiphase nutrition on carcass traits of broilers and nitrogen content in feces.

The experiment was conducted on 1216 chickens of the Ross 308 strain, separated by gender. The difference between groups (treatments) was in the type of the mixture used in the starter period, according to the following program: T1 (control group) – mixture containing 23% of crude proteins was used in nutrition from 1st to 21st day; T2 – from 1st to 7th day mixture containing 23% of crude proteins was used, and from 7th to 21st day mixture with 21,5% of proteins; T3 - from 1st to 14th day mixture containing 23% of crude proteins was used, and from 14th to 21st day mixture with 21,5% of proteins; T4 – on 1st, 2nd and 3rd day mixture with 23% of proteins was used, on 4th, 5th and 6th day with 22,5% of proteins, on 7th, 8th and 9th day mixture with 22,10% proteins, on 10th, 11th and 12th day mixture with 21,65% proteins, on 13th, 14th and 15th day with 21,20% proteins, on 16th, 17th and 18th day with 20,75% proteins and on 19th, 20th and 21st day with 20,30% proteins. The testing of carcass traits was measured on a total of 64 broilers and 8 chickens of both sexes, for each treatment. The nitrogen content in feces was determined on an aggregate sample of feces.

According to the processed data, there were no statistically significant differences in the carcass yields of "conventional carcass", "ready to roast" and "ready to grill" in the control and experimental groups. Furthermore, the values for yield and proportion of breast areas for male chickens and female chickens in the control group did not differ significantly compared with the experimental groups. The influence of multiphase nutrition programs was not at the level of statistical significance neither for the yield nor for the proportion of abdominal fat of both sexes. Multiphase nutrition treatments have resulted in certain reduction of nitrogen content of the feces.

The multiphase nutrition of broilers did not have a negative impact on carcass performance, which is a favorable aspect of its application, given that these programs can yield positive economic effects in production.

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Key words: broiler; multiphase nutrition; carcass performance; nitrogen

2-ANNU-14

EFFECT OF RAPESEED MEAL (RM) FED ON FATTENING LAMBS

Marin R. Yossifov, Lazar K. Kozelov

Institute of Animal Science, BG 2232, Kostinbrod, Bulgaria
m_vet@abv.bg

A b s t r a c t: Objectives were to evaluate the chemical composition and effects of Rapeseed meal (RM) on feed intake, growth and gain efficiency of fattening Synthetic Bulgarian Dairy Population (SBDP) lambs. Thirty-two lambs (16.71 ± 2.35 kg initial BW and 59 days of age) were stratified by weight and sex and randomly allotted to one of 2 pens and assigned to treatments (n = 2). Diets were formulated to meet CP, energy, calcium and phosphorus requirements. Treatments were isonitrogenous, isocaloric and with balanced Ca^{+2}: P^{+5} ratio. The basal diet consisted of roughage – Meadow Hay (MH), triticale, corn grains and a trace vitamin-mineral supplement. Protein source was 27.19% RM vs. 26.33% Sunflower Meal (SFM) on a diet basis (16 lambs.diet-1). Feed intake was monitored daily. Body weight was monitored every 2 weeks. After 82 days feeding trail were determined feed intake, DMI, average daily gain and gain efficiency. Final BW and Average Daily Gain (ADG) were significant affected by DDGSc ($p < 0.001$) treatments. Total DMI was lower for lambs fed RM diet as compared with lambs fed SFM diet. Results indicated that RM is a viable feedstuff for fattening lambs without any compromise in monitored performance.

Key words: fattening lambs; by-products; Rapeseed meal (RM); feed intake; DMI; gain efficiency

2-ANNU-15

INFLUENCE OF NUTRITION OF BLACK SLAVONIAN PIGS ON THE QUALITY OF HAM AND CURED HAM

Đuro Senčić, Danijela Samac, Zvonimir Steiner

Faculty of Agriculture, Department of Animal Science,
Kralja Petra Svačića 1d, 31 000 Osijek, Croatia
dsencic@pfos.hr

A b s t r a c t: Two groups of pigs, each group comprising 16 Black Slavonian pigs, were fed up to 130 kg body weight in the first and the second fattening period. They were fed forage mixtures with lower level (12% and 10%) of crude protein (Group A) and higher level (14 % and 12 %) of crude protein (Group B). Compared to pigs from Group A, pigs from Group B had higher share of ham in carcasses (26.65% : 24.62%), higher share of muscle tissue in carcasses (15.62% : 14.62%) and higher share of muscle tissue in ham (7.95 kg : 7.49 kg). Hams of pigs from Group B had thinner subcutaneous adipose tissue (3.10 cm : 3.80 cm), lower lightness level L* (35.30 : 39.50) of muscle tissue and lower fat content in muscle tissue (10.00 % : 12.00 %), whereas no significant differences were detected between the groups in terms of pH value, aw value, CIE a* and CIE b* values, and water and ash content. Hams of pigs from Group B received better grades for cross-section appearance (5.00 : 4.90) and firmness (8.50 : 8.00), whereas no significant differences between the groups were detected in terms of appearance, smell and taste.

Key words: nutrition; Black Slavonian pigs; ham quality; cured ham quality

2-ANNU-16

EFFECTS OF MINERAL SUBSTANCES WITH A BUFFERING EFFECT ON MILK PRODUCTION AND MILK COMPOSITION IN HEAT STRESS CONDITIONS

Milan Adamović[1] Horea Šamanc[2], Ivan Vujanac[2], Danijela Kirovski[2], Olivera Valčić[2]

[1]Institute for Technology of Nuclear and Other Mineral Raw Materilas, Belgrade, Serbia
[2]Belgrade University, Faculty of Veterinary Medicine, Belgrade, Serbia
m.adamovic@itnms.ac.rs

A b s t r a c t: This paper presents the results of investigations on the effects of a mineral mixture with a buffering effect, (bentonite, zeolite, magnesium oxide and sodium bicarbonate), on the quantity and composition of milk, pH value of cow's rumen contents, number and motility of microorganisms. The study was conducted from June to November on two groups cows: the control-C (129) and experimental-E (119). The investigated mineral mixture was included in the complete feed mixture (1%).

The milked yield during the hottest summer months (June – August) in group E was higher by 1.99 kg or 8.16% ($p < 0.05$). During the period (September – November) the milked yield in this group was also higher, but insufficiently to make the difference (0.38 kg or 1.53%) between the C and E group ($p > 0.05$). The yield of milk was higher in group E by 1.19 kg or 4.85% ($p < 0.05$) for the duration of the experiment (June – November). The differences in the content and yield of milk fat and protein, (% and kg) were insignificantly higher for group E during both investigation periods. The pH value of the rumen content was higher in group E and was within the optimal physiological limits. Before the morning meal the values for group C and E were 6.25:6.79 ($p > 0.05$), respectively. After the morning meal the corresponding rumen pH values were 6.01:6.92 ($p < 0.05$).The number and motility of the infusoria present in the rumen of group E cows was increased.

That the studied mineral mixture has a positive effect on the pH stability and development of the microorganisms present in the rumen under conditions of heat stress. This contributes to the arousal of favorite conditions for food digestion and utilization and hence to higher milk production and increased fat and protein content.

Key words: acidosis; cow; rumen; buffer

2-ANNU-17

THE EFFECT OF RESTRICTED FEEDING FOR AN EXTENDED PERIOD OF TIME ON THE CARCASS PARAMETERS OF FATTENING RABBITS

Lumturi Sena, Sabah Sena

Department of Animal Production, Agricultural University of Tirana, Albania
lumturisena@yahoo.com

A b s t r a c t: The effect of restricted feeding through a longer time period on the performance parameters and carcasses' qualitative traits of the fattening rabbits was studied. 42 rabbits of six weeks old were grouped into three identical groups. The rabbits under the control group were fed ad libitum, while the ones under the two other groups (experimental groups) were fed through some feeding time restrictions, as the following: (7 hours/day) during the two and three first weeks of fattening respectively. Afterwards, up to the age of 18 weeks, all of them were fed ad libitum again.

At the end of the trial, it was concluded that both the body weight and daily gain were statistically not influenced by the time duration of the restricted feeding. Although the second group of experiments, showed a substantial daily feed intake ($p \leq 0.01$), no significant effects on the feed conversion rate was demonstrated. Feed restriction time for two and three weeks didn't show the same effect on the carcasses' parameters. Parallel with the slaughtering age increase, the live weight, the carcass weight, the meat yield and abdominal fat were all increased ($p \leq 0.01$), but the percentage of the internal organs vs. the total carcass weight was lower.

Key words: rabbits; carcass; feed restriction; performance; live weight

2-ANNU-18

THE EFFECT OF PHYSICAL FEED STRUCTURE ON THE COMMERCIAL BROILERS' PERFORMANCE

Lumturi Sena[1], Dallëndyshe Peti[1], Nedeljka Nikolova[2]

[1]Department of Animal Production,Agricultural University of Tirana, Albania
[2]Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
lumturisena@yahoo.com

A b s t r a c t: The effect of the physical structure of broilers' feed (pelleted vs. mash feed) on their performace parameters was studied in this trial. Two groups of 300 commercial broilers each (ROSS-308) were created. The control group was fed with mash feed, while the experimental group was fed crumbled feed during the first three weeks (0–3 weeks) and than pelleted feed until the end of the life (slaughtering). Both feeds were of identical composition and formulas, as well as same environmental and management conditions was provided for both groups.

At the and of this trial, it was concluded that the broilers fed with pelleted feed had a 6-7% higher body weight, a higher carcass weight and a higher meat yield ($P<0.01$). The same conclusion was drawn on the flock uniformity. The pelleted feed fed group demonstrated a more efficient feed conversion rate (1.81 kg feed/kg live weight). These results clearly demonstrate the advantages of using the crumbled/pelleted feed vs the mash one, since the production parameters of commercial broilers show it.

Key words: broilers; crumbles; pellets; live weight; mash feed

2-ANNU-19

EFFECTS OF MİXTURE RATES ON SİLAGE QUALİTY OF COMMON VETCH COMBİNED WİTH TRİTİCALE AND ANNUAL RYEGRASS

Emine Budakli Çarpici, Necmettin Çelik

Department of Field Crops, Faculty of Agriculture, Uludag University, Gorukle Campus 16059 Bursa, Turkey
ebudakli@uludag.edu.tr

A b s t r a c t: The silage qualities of the mixtures of common vetch with triticale and annual ryegrass were investigated in Agricultural Research and Applying Centre of Uludag University, Turkey during the 2010 and 2011 growing seasons. Plant entries of the experiment were the common vetch (CV) cv. Gülhan, triticale (T) cv. Karma 2000 and annual ryegrass (ARG) cv. Caramba. The treatments of experiment composed of: (a) 75 % CV+ 25 % T, (b) 50 % CV + 50 % T, (c) 25 % CV + 75 % T, (d) 75 % CV + 25 ARG, (e) 50 % CV + 50 % ARG, (f) 25 % CV + 75 % ARG. On the silage samples which were placed in glass jars and kept for 60 days for fermentation. The parameters tested in the experiment were dry matter contens, pH, contents of crude protein, ADF and NDF, fleig points of the silages. Silages from the mixtures of common vetch, triticale and annual ryegrass were rated very good, and all other vetch and cereal silages were rated good according to fleig scores.

Key words: vetch; cereals; mixture, silage; dry matter content; fleig point

2-ANNU-20

RAPESEED MEAL IN NON RUMINANT NUTRITION

Vladislav Stanaćev[1], Dragan Milić[1], Ana Marjanović Jeromela[2], Vidica Stanaćev[3], Niko Milošević[3], Nikola Puvača[3]

[1]Perutnina Ptuj, Topiko doo, Petefi Brigade 2, 23400 Bačka Topola, Serbia
[2]University of Novi Sad, Institute for Field and Vegetable Crops, Maksima Gorkog 30, 21000 Novi Sad, Serbia
[3]University of Novi Sad, Faculty of Agriculture, Department of Animal Science, Trg Dositeja Obradovića 8, 21000 Novi Sad, Serbia
vidica.stanacev@stocarstvo.edu.rs

A b s t r a c t: Nutritive value of rapeseed meal and possibility of replacment of soybean meal by rape meal in the nutrition of pigs and poultry use is given in this paper. Introduction of rapeseed meal low in antinutritional factors to possibility to be applied up to 5% in nutrition of piglets and 10% in nutrition of sows and fattening pigs. There is also the possibility that the rapeseed meal replaces totally soybean meal in the nutrition of sows and pigs in the second phase of fattening without any negative effects to animals. Limited level of rapeseed meal in the nutrition of young categories of pigs is caused by their higher needs of energy and aminoacids. In broilers nutrition usage of rapeseed meal of different cultivars in amount of 5% did not significantly effected the body weight in the first period of fattening. Effect of cultivar was very significant. The bestresults were obtained with the cultivar Slavica, then NS-07 and Banaćanka, respectively on the performances of the chickens in all the groups in comparison with control group. Feed conversion ratio was increased in both periods of fattening as well as in the entire experiment.

Kay words: rapessed meal; pigs; glucosinolates; rapeseed cultivars; chickens

2-ANNU-21

EFFECTS OF S. CEREVISIAE ADDITION TO ANATOLIAN WATER BUFFALO DIETS ON DRY MATTER INTAKE, MILK YIELD, MILK COMPOSITION AND SOMATIC CELL COUNT

Taşkın Değirmencioğlu [1], Songül Sentürklü[2], Selda Özbilgin[1], Tülay Özcan[3]

[1]Department of Animal Health and Husbandry,
Uludag University Karacabey Vocational School.
Karacabey – Bursa, Republic of Türkiye,
[2]18 March Çanakkale University Biga Vocational School
[3]Uludag University Faculty of Agriculture, Department of Food Engineering,
Bursa, Republic of Türkiye
taskin@uludag.edu.tr

A b s t r a c t: This study was carried out to determine the effect of yeast addition on dry matter intake, milk yield, milk composition and somatic cell count in Anatolian water buffalo diets. 10 buffaloes (genus: Bubalis, species: Bubalis bubalis) were randomly divided into two groups (five animals each), with 21 days of adaptation period and 7 days of the experimental period comprised the sampling period. SC-treated groups (n = 5 buffalo/group) received 30.0 g of SC per buffalo per day. Compared to the control group, the SC-treated group consumed more total dry matter ($P<0.05$; 14.27 vs. 13.50 kg/day) and produced more milk/day ($P<0.01$; 7.13 vs. 6.22 kg/day). Dietary yeast inclusion significantly increased alfalfa dry matter intake during a 28-day lactation period ($P<0.01$; 10.41 vs. 9.81 kg/day) compared with the control diet. Yeast application significantly reduced the somatic cell count (SCC) in milk ($P<0.05$; 3.33 and 1.08 SCC (log 10/ml) for control and SC-treated groups, respectively). The compositions of milk fat (58.40 and 59.00 g/kg), non-fat solids (120.00 and 122.80 g/kg), protein (46.40 and 46.26. g/kg) and lactose (37.72 and 38.90 g/kg) were similar for both groups. In conclusion; it has been thought that farmers with Anatolian water buffalo can benefit from the use of yeast cultures in early lactation diets, which may improve efficiency and provide economic advantages.

Abbreviations: SC, Saccharomyces cerevisiae; DMI, dry matter intake; AWB, Anatolian water buffalo; NDF, neutral detergent fiber; ADF, acid detergent fiber; TDM, total dry matter; SCC, somatic cell count, 4 % FCM, 4% fat-corrected milk yield

Keywords: yeast; Anatolian water buffalo; dry matter intake; milk composition; somatic cell count

2-ANNU-22

CHEMICAL COMPOSITION OF DIVERGENT RED CLOVER CULTIVARS

Gordana Šurlan Momirović[1], Mirjana Menkovska[2], Sanja Vasiljević[3], Irena Ćalić[1], Ramadan Salem Ahsyee[4]

[1]Univerzitet u Beogradu, Poljoprivredni fakultet, Beograd-Zemun, Serbia
[2] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[3]Institut za ratarstvo i povrtarstvo, Novi Sad, Serbia
[4]Fakultet prirodnih nauka (Zentan), El-Gabal El-Gharby Univerziteta, Libija
surlang@agrif.bg.ac.rs

A b s t r a c t: Red clover (Trifolium pratense L) is the second most important perennial forage legume in Serbia. It is grown on about 20 million hectares worldwide, while in Serbia it is grown on around 120.000 ha. An increase in forage quality, most importantly the crude protein content, is one of the main goals of red clover breeding. Another major parameter of forage legume quality, especially from the point of view of ruminant nutrition, is the in vitro digestibility of dry matter. Values of both these parameters decrease with age due to a reduced leat to stem ratio and lignification. The decrease in digestibility after budding comes as a result of an increased lignin content and a rise in the proportion of starch polysaccharides. In the context of forage quality, especially important from the point of view of ruminant nutrition is the relation between structural and non-structural carbohydrates. Structural carbohydrates include neutral detergent fiber (NDF) and acid detergent fiber (ADF), while non-structural ones are mostly starch. In line with the current trends in the production of high-quality animal feed in the world (U.S., Canada, Great Britain, the Netherlands, Sweden) and in Serbia, our future breeding work for improved forage quality needs to identify genetic variability within the species Trifolium pratense related to the insufficiently studied quality parameters such as ADF, NDF, PPO, and phytoestrogens.The objective of this study was to determine the dry matter chemical composition in the whole plant of 50 divergent red clover cultivars.

Key words: chemical composition; red clover; forage legume

2-ANNU-23

EFFECTS OF LARGE AMOUNT VITAMIN E SUPPLEMENTED DIETS ON ITS TRANSFER IN THE YOLK AND EGG STRUCTURE

Natasha Gjorgovska[1], Kiril Filev[2]

[1] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[2]Ss. Cyril and Methodius University in Skopje, Faculty of Agricultural Sciences and Food, Skopje, Republic of Macedonia
natashagjorgovska@gmail.com

A b s t r a c t: The transfer of vitamin E from high level supplemented diets in egg yolk and the effect on egg structure was investigated. Hisex Brown, molted laying hens, assigned in three groups (10 in each) were used in the experiment. Two, 80 weeks old, hens were accommodated in each cage. The hens were fed basal diet, containing 30 mg vitamin E kg-1 (group 1), basal diet supplemented 100 mg vitamin E kg-1 (group 2) and basal diet supplemented 200 mg vitamin E kg-1 (group 3). The egg weight and albumen weight were significantly higher in the experimental groups 2 and 3, but the egg yolk has similar weight in all three groups. The content of vitamin E in the yolk was measured. The concentration of vitamin E in 100 g yolk in group 1, 2 and 3 was 8.52 mg, 14.23 mg and 28.19, respectively. The transfer of vitamin E was significantly higher in the experimental groups ($p<0.01$).

Key words: vitamin E; egg production; egg quality

2-ANNU-24

INFLUENCE OF PHENOPHASES AND SOIL SUPPLEMENTS WITH P AND Mg ON THE ABSORPTION OF PHOSPHORUS AT ALFALFA (BANAT ZMS II)

Elmi Jusufi

Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
Elmi_Jusufi@hotmail.com

A b s t r a c t: Cultivating of experimental alfalfa was performed in vegetation pots up with alluvial-diluvial soil from certain locations in R. Macedonia (the villages of Saraj, Radusha, Jegunovce and Kodzhilari), during which part of the plants (the pots) on the expertimental locations were fertilized with 10gr/pot NPK (10:30:15 +T.E.). Examination samples of the experimental alfalfa were taken in two phenophases.

The chemical analysis showed a significant difference in the contents of examined parameters i.e. the phosphorus values ranged from 23.2 mg/100 g (v. Jegunovce) up to 50.7 mg/100 g (v. Kodzhilari), and for magnesium from 195.5 mg/100 g (v. Radusa) up to 19.0 mg/100 g (v. Saraj).

The contents of present phosphorus in dry mass of alfalfa showed dependance on the supplements of the soil (higher contents of phosphorus in the leaves of fertilized alfalfa for 17.61%, or in the stems for 21.11% compared to the nonfertilized). Also, with higher magnesium concentrations in the soil (v. Radusa) in the alfalfa's leaves and stems a reduced amount of absorbed phosphorus was found.

At the two phenophases (before blossoming and blossoming) the contents of phosphorus in the dry mass of the leaves is significantly higher in comparison with the stems (for 32.8% at the nonfertilized alfalfa, or for 20.07% at the fertilized). In the blossoming phase a tendency for decreasing the contents of phosphorus in the dry mass was found.

Key words: alfalfa; soil; dry mass; leaves; stems; phenophases

2-ANNU-25

COMPARISION OF FATTY ACID COMPOSITION BETWEEN YOLKS OF EGG WHITE AND BROWN OF HEN WHICH FEEDING SAME METHOD

Mustafa Selcuk Alatas, Ozcan Baris Çitil

Department of Animal Nutrition and Nutritional Disorders,
Faculty of Veterinary Medicine,
Selcuk University, 42075 Konya, Turkey.
selcukalatas@gmail.com

A b s t r a c t: In this study, fatty acid composition of egg yolk of brown and white chickens feding with the same method were investigated by gas chromatography. Twenty two different fatty acid were determined in the egg. Palmitic acid were defined as the maximum saturated fatty acid. Linoleic acid, linolenic acid, arachidonic acid was highest amount in unsaturated fatty acids. In this study, n-3/n-6 ratio of egg white higher than brown egg. Egg yolk of white chicken in terms of fatty acids may be a valuable in the feeding cage for human consumption.

Key words: brown egg; white egg; fatty acid composition; gas chromatography.

2-ANNU-26

EFFECTS OF BIOAKTIV® POWDER ADDITION IN DIET ON PRODUCTION PARAMETERS AND ENVIRONMENT OF LAYING HENS

Nedeljka Nikolova[1], Dragoslav Kocevski[2], Aco Kuzelov[3], Lumturi Sena[4]

[1] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[2]Ss. Cyril and Methodius University in Skopje, Faculty of Agricultural Sciences and Food, Skopje, Republic of Macedonia
[3]University Goce Delchev, Faculty of Agriculture, Štip, republic of Macedonia
[4]University of Tirana, Faculty of Agriculture, Tirana, Albania
nikolova13@gmail.com

A b s t r a c t: After the ban of antibiotic feed additives, a number of natural substitutes have been launched with more or less success. One of them, Bioaktiv powder, has been tested in a poultry farm in Glogje village near Tetovo in Republic of Macedonia. In the experiment were included two groups of Isa-Brown layers (C, control and E, experimental group) located in two objects with a capacity of about 1380 layers, placed in battery cages with complete automation and controlled ambient conditions. The layers were in the 53th weeks of age and the experiment lasted four months. Bioaktiv powder was added in the mixture of E group in amount of 350 g/t food every day. In the time of testing the production parameters as well as minimum and maximum temperatures in the objects were estimated. Cumulative mortality of chickens in E group was 4.01% and was 2.11% in absolute or 52% in relative values lower than mortality in C group (6.12%). Better egg production was in group that used Bioaktiv powder with more than 4% expressed in relative value. The percentage of broken eggs in control group was the weekly average of 1.72%, while in experimental group was 1.02% especially in the summer period of testing. In E group of layers the amount of ammonia in the average was 5.37 ppm, while in the C group was amounted to 8.63 ppm. In the stall with experimental birds was not felt any smell of hen's feces, the air inside was pure and easily breathed. The general conclusion is that using of Bioaktiv in the layer's mixture had greatest influence on mortality of birds, on percentage of broken eggs and on quantity of ammonia in the stall, while the less affect in egg production and food consumption per day and per egg.

Key words: bioaktiv powder; layers, production parameters, environment.

2-ANNU-27

EFFECTS OF BIOAKTIV® POWDER ADDITION IN DIET ON EGG QUALITY PARAMETERS OF LAYING HENS

Nedeljka Nikolova[1], Dragoslav Kocevski[2], Aco Kuzelov[3], Rodne Nastova[1]

[1] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[2]Ss. Cyril and Methodius University in Skopje, Faculty of Agricultural Sciences and Food, Skopje, Republic of Macedonia
University Goce Delchev, Faculty of Agriculture, Štip, Republic of Macedonia
nikolova13@gmail.com

A b s t r a c t: Bioaktiv is natural calcium carbonate in powder form, which is treated by special bio-resonance procedure and by oxygen at the end. There are no artificial substances and chemicals and the same is recommended for poultry farm breeding. Bioaktiv additive is natural product which contains (90% calcium carbonate and 8% silica acid) and may be an appropriate substitute for antibiotic feed additive. The experiment tested the impact of Bioaktive powder on quality properties of eggs obtained from flock of Isa brown hens and compared with another control group which did not receive Bioaktiv by food. The layers were in the 53th weeks of age and the experiment lasted four months Bioaktiv powder was added in the mixture of experimental group in amount of 350 g/t food every day. Once a week were tested some of egg parameters: mass of eggs (g), egg shape index (%), eggshell mass (g) and eggshell thickness (mm). Eggs were taken from several approximately same places and levels from the nests of battery cages by random selection. The average mass of eggs in control group was 64,11 g, while in experimental group was 64.78 g. The average egg shape index in the control group of hens was 74.95% as opposed to the experimental group that was 75.64%. The group of layers fed with Bioaktiv addition had higher shape index form, what indicated for eggs with more round shape. Average eggshell mass in control group was 6.87 g, while in experimental group was 7.16 g., which indicates that using of Bioaktiv at high ambient temperatures can prevent decrease of eggshell mass. Regarding the eggshell thickness, a very little advantage had the group that received Bioaktiv. At least, the general conclusion is that Bioaktiv powder had the biggest influence on the eggshell mass, while slightly less impact on egg mass and eggshell thickness. The importance of good ventilation facility and highly balanced diet, especially in the summer months is unavoidable, because the greatest decline in the quality of eggshell came from them if are not optimal.

Key words: bioaktiv power; layers; egg parameters

FSQU

3. Квалитет и безбедност на храна
Food Safety and Quality

3-FSQU-01

CHEMICAL MICROBIOLOGICAL AND SENSORY CHANGES OF THE TRADITIONAL MACEDONIAN SAUSAGE KEPT ON DIFERENT TEMPERATURES

Aco Kuzelov[1], Oksana Savinok[2], Mitre Stojanovski[3], Nedeljka Nikolova[4], Tanja Angelkova[5]

[1]University Goce Delcev Stip Faculty of Agriculture Strit Goce Delcev 89 Stip
[2]National academy food technologies Odessa Ukraina
[3]Universitu Kliment Ohritski Facultu of biotechnical science Bitola
[4] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[5]University Goce Delcev Stip Faculty of tourism and business logistics Gevgelija
aco.kuzelov@ugd.edu.mk

A b s t r a c t: This study reports the changes that occur at vacuum packed Macedonian Sausage produced in the traditional way during the storage in cooling chambers at different temperature conditions of 6ºC and 15ºC. Changes that occur during the storage were examined on 2-nd, 15-th, 25-th and 50-th day from production. It was determined that during the storage time of the sausages substantial changes occur in the decreasing content of water and increasing content of proteins, fats and mineral materials. The total number of bacteria in the sausages increases during the storage mostly of those at 15ºC. Best sensor characteristics till the 50th day showed the sausages kept on 6ºC.

Key words: Macedonian sausage, chemical composition, temperature

3-FSQU-02

IMPACT OF STARTER CULTURES FOR SOME PHYSICAL AND CHEMICAL SENSORY PROPERTIES IN SMOKED SAUSAGES PRODUCED IN INDUSTRIAL CONDITIONS

Aco Kuzelov[1], Mitre Stojanovski[2], Nedeljka Nikolova[3], Tanja Angelkova[4]

[1]University Goce Delcev Stip Faculty of Agriculture Strit Goce Delcev 89 Stip
[2]Universitu Kliment Ohritski Facultu of biotechnical science Bitola
[3]Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[4]University Goce Delcev Stip, Faculty of tourism and business logistics Gevgelija
aco.kuzelov@ugd.edu.mk

A b s t r a c t: Tea of sausages produced with the addition iof starter culture (Lactobacilus sakei + Streptococus camosus) hat a final pH (15 days of production) 4.87 to 5.93, aw – value was 0.869–0.849. Starter cultures did not afect c alorie and schemical composition of the finished product.The use of starter cultures in production sausage gives a product with better senzory characteristics.

Key words :sausage; aperance; odor

3-FSQU-03

INFLUENCE OF THE NUMBER OF SOMATIC CELLS IN MILK ON THE YIELD AND ABATEMENT OF CHEESE

Tatjana Kalevska[1], Ljupce Kocoski[2]

[1]Dairy, "Bistra" Industriska 48 Kicevo, Republic of Macedonia
[2]University "St. Kliment Ohridski", Faculty of Biotechnical Sciences, Bitola, Republic of Macedonia
tkalevska@gmail.com

A b s t r a c t: The purpose of this study is to determine the influence of the number of somatic cells in milk on the yield and abatement of cheese.

During the study milk is categorized in three categories depending on the number of somatic cells. The average number of somatic cells in the milk from I category is 444.780/ml, II category 825.560/ml and in III category 1.242220/ml.

White brined cheese is produced under the same technological conditions from the three categories of milk.

Measuring the yield of the cheese is performed on the 1st, 15th and 30th day, after the ripening of the cheese. The yield decreases in the cheese from second and third category as the number of somatic cells in milk increases.

Cheese abatement is determined in stages from the 1st -15th day and 15th -30th day, and after the end of the cheese ripening the total abatement is determined.

By monitoring the dynamic of the cheese abatement, it was determined that in the three categories the abatement has a higher value in the second stage of the cheese ripening. The difference in abatement value between the three categories of cheese is in correlation with the number of somatic cells in the milk.

Key words: milk, somatic cells, cheese yield, cheese abatement.

3-FSQU-04

LINEAR MEASUREMENTS AND TISSUE COMPOSITION OF THE CARCASS FROM RABBITS

Katerina Belichovska, Daniela Belichovska

[1]Ss Cyril and Methodius University in Skoje, Faculty of agricultural sciences and food, 1000 Skopje, Republic of Macedonia,
kbelicovska@yahoo.com // dbelicovska@yahoo.com

A b s t r a c t: Tests are performed on 60 carcasses of rabbits, distributed in three groups, with the aim to determine the linear measurements and tissue composition of the body. The first one were rabbits from Californian (KA), the second group from New Zealand White race (H3) and the third group were crossbreeds (KA x H3). Up to 30 days young rabbits were only breast-fed. From 30 to 90 days old they were kept in appropriate cages and fed ad libitum with feed mixture. At the age of 90 days they were slaughtered in a usual way.

It was found that crossbreeds have significantly ($P < 0.05$) greater body length (symphysis pubis – atlas) (33.65 cm), the trunk (symphysis pubis – first rib) (28.00 cm) and thigh (symphysis pubis – ankle) (17.75 cm), and larger circumference of the thigh (in the largest part) (18,00 cm) compared to Californian (28.80 cm, 23.85 cm, 15.50 cm and 15.30 cm respectively), or New Zealand White race (29.55 cm, 24.50 cm, 15.40 cm and 15.75 cm).

With the dissection of the basic parts of the left half, it was determined that the body of crossbreeds contains 79.91% muscle tissue, 9.90% fat and 10.19% bone tissue. The body of New Zealand White race contains about the same percentage of muscle tissue (79.78%), more fat (10.63%) and less bone (9.59%). The body of Californian White race contains less muscle (77.63%) and fat (9.22%) and more bone (13.15%) tissue. Differences in the content of muscle and adipose tissue between the genotypes are statistically insignificant. Californian race contains significant ($P < 0.05$) more bone from New Zealand and crossbreeds.

Key words: rabbits; carcass; linear measurements; tissue composition

3-FSQU-05

COMPARATIVE ANALYSES OF CHEMICAL COMPOSITION OF ROYAL JELLY AND DRONE BROOD

Ralitsa Balkanska[1], Ivanka Zhelyazkova[2], Maya Ignatova[1]

[1]Institute of Animal Science, Kostinbrod, Spirka "Pochivka" 1, Bulgaria
[2]Trakia University, Stara Zagora,Students'campus, Bulgaria
r.balkanska@gmail.com

A b s t r a c t: Royal jelly (RJ) is commonly consumed for its nutritional properties and it has been widely used in commercial medical products, health foods and cosmetics in many countries. Because of the high price of this product, sometimes RJ can be adulterated by adding other products, less expensive, like drone brood (DB). The main purpose of this work is to determine the chemical composition of RJ in comparison with DB. To investigate the effect of adulteration with DB, the chemical composition of mixtures of RJ and DB have been analyzed. Seven RJ sample and seven DB samples were analyzed for water content, protein, fructose, glucose, sucrose, total sugars, pH, total acidity and electrical conductivity. In addition, these parameters were applied to mixtures of RJ and DB samples. All samples were collected from the experimental apiaries of Institute of Animal Science (IAS), Kostinbrod and stored at -20 oC before analysis.

The differences in water content, dry mater, protein, pH, total acidity, electrical conductivity between RJ and DB samples are significant ($p<0.001$).

Key words: royal jelly, drone brood, chemical composition

3-FSQU-06

VARIETY- THE MAIN FACTOR FOR IMPROVING THE QUALITY OF DURUM WHEAT (T. DURUM)

Mirjana Menkovska[1], Mariya Mangova[2], Ivanka Petrova[3], Tanko Kolev[4]

[1] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia;
[2]Institute of Plant Genetic Resources- Sadovo, Bulgaria;
[2]Institute of Cryobiology and Food Technology- Sofia, Bulgaria
[3]Agricultural University-Plovdiv, Bulgaria
blend_bg@yahoo.com

A b s t r a c t: The grain quality of 16 durum wheat varieties with different origin was studied. It were determined the following parameters: 1000 kernel weight, specific weight, vitreousness, crude protein, wet and dry gluten, yellow pigment, SDS sedimentation value.

The Bulgarian varieties have better physical characteristics of grain that are a precondition for higher semolina yield. The varieties originated from Austria, France, Hungary, Italy and Spain have much higher content of yellow pigment in semolina and SDS sedimentation value. More over better protein quality makes the group of these varieties a very good row material for production of semolina and pasta.

The Dendrogram of the cluster analysis visualized the hierarchical grouping of the evaluated varieties. At a relatively low level they group in two clusters. The varieties Selyendur (Hungary) and Levante (Italy) were unique with highest SDS sedimentation value.

In this study 70.47 % of the total variation in the estimates of similarity was revealed by the first two components. The characters: 1000 kernel weigh, wet gluten, SDS sedimentation value and yellow pigments had the greatest impact as far as clustering is concerned.

Key words: durum wheat, 1000 kernel weigh, SDS sedimentation, wet gluten, yellow pigment,

3-FSQU-07

THE NATURAL ADDITIVE WITH ANTIOXIDANT PROPERTIES FOR MEAT PRODUCTS

Oksana Savinok[1], Inna Litvinova[1], Aco Kuzelov[2]

[1]Odessa National Academy of Food Technologies, Odessa, Ukraine
[2]Faculty of Agriculture, University Goce Delcev, Stip, R. Macedonia
savoksamit@mail.ru

A b s t r a c t: The possibility of application of polyfunctional additive with antioxidant properties in meat products has been considered in the article. The additive has been obtained as a result of phenol compounds and polysaccharide combination.

The biologically active components have been extracted by microwave extraction from grape seeds. Microwave extraction provides maximum extraction of phenol compounds from the raw material and their biological value safety. The correlation of the compounds polyphenols and polysaccharide has been optimized, the mechanism of their interaction has been determined.

The technology of its application in meat products has been worked through. The significant decrease of the amount of peroxide compounds in the product with the additive during storage has been found out, stability of the introduced compounds towards technological factors influence, including high temperatures, has been pointed out.

The application of the developed additive with antioxidant properties will allow to increase the safety of meat products to a great degree and can be suggested as a prophylactic for reducing the risk of modern diseases of our civilization.

Key words: meat products, polyphenols, polysaccharide, antioxidant properties

3-FSQU-08

EXAMINATION OF AFLATOXINS B_1 AND G_1 IN FEED

Julijana Tomovska*, Velina Stefanovska, Vesna K. Hristova, Nikola Georgievski

University ,,St.Climent Ohridski,, Faculty of Biotechnical Sciences,
Bitola, Republic of Macedonia
dzulitomovska@yahoo.com

A b s t r a c t: Aflatoxins B_1 (AFB_1) and G_1 (AFG_1) are micotoxins derived from molds Aspergillus flavus and Aspergillus parasiticus present in animal food stored in an environment with relative humidity 85%, moisture content of the surface about 30%, temperature of 250 C and suitable substrate.

Tests for AFB1 and AFG1 are made in 60 feed samples (corn, concentrate and silage) from 20 locations. Used two methods, Charm II 6600 Luminometer where aflatoxins fluorescent strongly in ultraviolet light of 365 nm, B_1 generates a blue fluorescent and G_1 green fluorescent and with VICAM where AFB_1 are extracted in portions with acetonitrile /methanol and application of HPLC. In corn C(AFB_1) / ppb with Charm II 6600 Luminometer was 3.5 ± 2.0647; in concentrate 3.25 ± 1.8883; and in silage 6.45 ± 2.0124; for C(AFG1) / ppb was: 3.2 ± 1.9358; 2.9 ± 1.9324; and 5.7 ± 2,22663 respectively. In the same samples C(AFB_1) / ppb determinate with VICAM are: 4,49 ± 2.3548; 4.93 ± 27941 and 7.73 ± 1.766054. The results obtained by HPLC are with two decimal places and for unit higher. Aflatoxins present in the feed used by the Pelagonian region varies within the limits of normal (0–10 ppb) except silage which has a higher value due to its greater exposure to mold.

Determining the concentration of AFB_1 and AFG_1 in animal feed is of great importance, the feed with aflatoxins results in high toxicity, carcinogenicity and mutagenicity and affects the health of livestock and their application in nutrition and health of people.

Key words: Aflatoxins, Aflatoxins, B_1, Aflatoxins,G_1, animal feed

3-FSQU-09

INHIBITORY SUBSTANCES DETECTION IN ROW MILK THROUGH BETA-LACTAM AUROFLOW ™ KIT

Fatmira Shehu, Dardan Shehdula, Bizena Bijo

Agricultural University of Tirana, Faculty of Veterinary Medicine, Tirana-Albania
fatmira_shehu@yahoo.it

A b s t r a c t: The objective of this study was the determination of inhibitory substances in milk samples tested preliminary for the somatic cell number. This study was carried out in Korca region in the framework of milk sanitation monitoring plan.

The presence of inhibitory substances in raw milk is not only a public health problem but also a technological problem because of milk alteration during its transformation into cheese. Nowadays the investigation of inhibitory substances still poses a problem despite the common interest of public health protection by official bodies, as well as the quality of milk production by dairy processing facilities (or dairies).

The detection of inhibitory substances in milk was carried out using a rapid diagnostic system, Beta-lactam AuroFlow ™ kit, whose sensitivity is in line with EU standards for the detection of 13 antibiotic beta-lactam group and a core group of tetracycline. The features of the kit are rapid strip test method – 7 minutes, novel binding protein that quires no heating step, high sensitivity and high reproducibility.

In this way authorities will be able to act in order to prevent the presence of harmful products into the food chain (Instruction 5 dt.25.3.2011 III / 8 and Dir. 96/23 CE)

The dairy industry in this region simultaneously will be able to avoid the economic damage caused by defective products. At the end of this study we identified 18/70 positive samples out of which 6 samples resulted strong positive and 12 samples weak positive.

Key words. Milk, inhibitory substances, somatic cells, public health

3-FSQU-10

INVESTIGATION OF GRAIN PROTEIN CONTENT OF WINTER TRITICALE CULTIVARS

Veselinka Zečević [1], Jelena Bošković[1], Desimir Knežević[2], Danica Mićanović[3], Mirjana Menkovska[4]

[1]Faculty of Biofarming, Bačka Topola, Megatrend University Belgrade, Serbia
[2]Faculty of Agriculture, Lešak, University of Priština, Serbia
[3]Serbian Chamber of Commerce, Belgrade, Serbia
[4]Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
joca@kg.ac.rs

A b s t r a c t: The present research was carried out to investigate variability for grain protein content of four winter triticale cultivars (Trijumf, Favorit, Oganj and Odisej). Triticale is a high energy source for all classes of animals, with energy levels comparable to or better than other cereals. Triticale digestibility is comparable or superior to that of other cereals. Triticale starch fermentation is similar to barley and oats, and its enzymatic digestion is higher, which has implications for digestive efficiency beyond the rumen in ruminant animals. Net protein utilization of triticale can be superior to that of other cereals which may reflect the high levels of lysine found in triticale, and its high protein efficiency. Lysine content of triticale is typically higher than in barley. Using triticale as a feed energy source for animals often means that a reduced amount of protein supplementation is needed in the diet. The superior protein quality and high yield potential of triticale grain has kept up the international interest in using the crop as a swine feed. Triticale is also more cost-effective than other cereals, as its high lysine content means less protein supplements are required.

For this investigation, field experiment was set up over 2007/2008-2008/2009 growing seasons on chernozem soil in Bačka Topola. The protein content was determined by Kjeldahl method. Grain protein content depended to investigated cultivars and years. In average, protein content ranged from 12.02% (Odisej) to 14.40% (Favorit). Higher values of protein content were found in 2007/08 (14.86%) than in 2008/09 (11.70%). Statistically significant differences for grain protein content were found among cultivars, years, and for their interactions. The analysis of phenotypic variance indicated that grain protein content was more affected by the year than by the genotype.

Key words: triticale, cultivars, grain protein content, variability

3-FSQU-11

IMPROVEMENT OF CEREAL BREEDING

Desimir Knežević[1], Mirjana Menkovska[2], Veselinka Zečević[3], Danica Mićanović[4], Srdjan Atanasijević[5], Dragica Zorić[6]

[1]Faculty of Agriculture, Lesak, University of Pristina, Kosovo and Metohia, Serbia,
[2] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[3]Faculty of Biopharming Backa Topola, University Megatrend Belgrade
[4]Serbian Chamber of Comerce, Belgrade, Republic of Serbia
[5]Technical College of Professional Studies, in Kragujevac, Department of Informatics
[6]Faculty of Agriculture Belgrade-Zemun, University of Belgrade, Nemanjina 6, Zemun 11080 , Serbia
deskoa@ptt.yu

A b s t r a c t: The main goal of plant breeding is improvement traits of quality, yield and resistance to stress abiotic and biotic factors. Thousand years ago, people selected the best plants, seeds or fruits to produce seed for new crops and food for human and animal nutrition. Modern plant breeding based on genetic principles and contributed to mutual increasing of yield as well quality components (content of protein, amino acids, fat, sucrose, mineral elements etc.). Breeders in conventional breeding programs in last six decades made changes of plant phenotypes, significantly improved resistance to diseases, earliness, frost and drought resistance and improved scientific farming practice, baking and milling technology, beverage production technology. By using of bioinformatics and improved technology, breeders have developed ways to improve and accelerate the breeding process to combine desire trait in new genotypes as well to operate at the level of individual cells and their chromosomes. Now-days, modern biotechnology used to improve human nutrition, and developing genotypes with significant higher yield and quality in compare to genotypes created in conventional breeding By genetic modification is possible add, modify or delete a trait without interfering two complete genomes. However, genetically modified crops can be used after assessment in terms of human health, food safety and the environment.

Key words: breeding, genotype, biotechnology, yield, quality

3-FSQU-12

THE EVALUATION OF HEAVY METAL CONTAMINATION IN FISHES AND MOLLUSKS SPECIES COLLECTED FROM ALBANIAN'S LAGOON

Fejzo Selami[1], Anisa Aliaj[2]

[1]Agriculture University of Tirana, Faculty of Veterinary Medicine, Faculty of Agriculture and Environmental, Tirana, Albania
[2]University of Tirana, Faculty of Environmental Engineering, Tirana, Albania
selami.fejzo@gmail.com

A b s t r a c t: Fish and mollusks are important sources of food for humans and are a key component in many natural food webs. Fish and mollusks are also one of the sources of biologically valuable protein, fats and fat soluble vitamins. The high quality protein of fish and mollusks are better for health than that in meat and poultry. Fish and mollusks contain about 15-24% protein; 1-3% carbohydrate, 0.1-22% lipid; 0.8-2% inorganic substances and 66-84% water. Each of these is important for human health, growth and intelligence.

This study was conducted to investigate the contamination of heavy metals in the tissues of commercially important fish and mollusks species and to evaluate risks to human health associated with seafood consumption. The aim of this study is to provide information on the Hg, Cd, Pb and Cr levels in the muscle, liver and kidney tissues of species of fish and mollusks (Merlucus melrucis, Cyprinus carpio, Mytillis galloprovincialis, Ostriches spp.).The fishes and mollusks samples for the metal determinations were collected at three sites in Butrint's Lake Karavasta's Lagoon and Vain's Lagoon. In addition, this study also attempted to compare the measured values with national and international standards for food and human health. The fishes and mollusks samples will to be analyzed for Hg, Cd, Pb and Cr levels with Absorbent Atomic (AA) in Toxicological Department in Food and Safety Institute. The results from this study will to be discussed with CE references about the concentrations of Hg, Cd, Pb, and Cr in the liver, kidney and muscle.

Kew words: fish, mollusks, heavy metals, toxicology

3-FSQU-13

THE MOST SIGNIFICANT CHALENGES AND ACHIEVEMENTS IN FEED TECHNOLOGY IN SERBIA

Jovanka Levi, Slavica Sredanović

University of Novi Sad, Institute of Food Technology, Research Centre Feed-to-food, 21000 Novi Sad, Bulevar cara Lazara 1, Serbia
jovanka.levic@fins.uns.ac.rs

A b s t r a c t: Changed economic and systemic circumstances in the world and in Serbia require response from scientific research to resolve social, ecological and economic challenges (increasing demand for safer, healthier and better quality food) and to enable sustainable use and production of renewable bio-resources. That would contribute to intensified science research, better application in practice and finally to accomplishing of better results in agricultural and food production in accordance with strict EU regulations. Scientific approach must contribute to development of feed industry by defining practical and acceptable methodologies in the food production chain. Technological processes used in Feed industry have unavoidable impact in food chain and their permanent development and improvement is necessary for future challenges. They must be optimized in order to ensure that all ingredients of the formulated mixture maintain their prescribed concentrations and activities. Proper physical form, consistency, stability and other characteristics of feed must be also achieved by using adequate processing technologies and equipments.

Key words: feed technology, industry, quality, safety, equipment, processing

3-FSQU-13

PRODUCTION OF WHITE BRINE CHEESE BY ULTRAFILTRATION

Nataša Mateva[1*], Sonja Srbinovska[2], Pacinovski Nikola[1], Elena Eftimova[1], Bone Palasevski[1]

[1]*Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia*
[2] *Ss. Cyril and Methodius University in Skopje, Faculty of agriculture science and food, Aleksandar Makedonski,1000, Skopje, Republic of Macedonia*
ndubrova@yahoo.com

A b s t r a c t: The utilization of ultra filtration in the world, as a method of serum proteins exploitation is a long tradition, although in our country it is barely used.

As a raw material for performing the experiments was used collected cow milk, while the chemical analysis of the variants carried out in a milk laboratory, at the Institute for Animal Husbandry-Skopje. The ultra filtration was performed with polypropylene spiral membranes, type Alfa Laval FS40PP-6338/48, with membrane capacity of 8 m^3/h and filtration of the components to molecular mass to 10.000 Da. During the researches were also monitored the physical and chemical parameters of the obtained retentan (concentrate of total proteins and fats) and permeat (lactose and mineral materials). During the 45th day of the ripening, under industrial production of white cheese salted in brine by a proccess of ultrafiltration, was also monitored the dynamics of certain paramters (dry substance, lactic fats, total proteins, soluble nitrogen, primary and secondary nitrogenous substances). As a subsidiary raw materials during the production were used: mesophilic homophermentative starter culture, type O-R704, composed of *Lactococcus lactis supsp.lactis* and *Lactococcus lactis subsp. cremoris* (Chr. Hansen, Данска), $CaCl_2$ solution, (0.02–0.04%), yeast 0.02% Chy Max 2080 IMCU/g.

As a basic indicator for establishment of rheological features of the cheese was monitored the moistness in fat-free dry substance during the proteolytic influences, i.e the process of maturing. From the results could be concluded that the average value of 66.37 moistness, in fat-free dry substance is in accordance with the Rulebook and the Codex Alimentarius (2000). According to that cathegorisation, regarding the firmness this type of cheese belongs in the group of semifirm cheeses, while regarding the milk fat in the dry substance (48.47) it is considered full-fat cheese, ripen in brine.

The basic goal of the research is determining the possibilities of higher level of serum proteins exploitation and their incorporation with the protein complex in the process of white cheese salted in brine production. The various technologies of serum proteins exploitation enable to monitor their representation and usage until final product.

Key words: cow milk; white cheese salted in brine; ultrafiltratio

ENRE

4. Екологија, природни ресурси и животна средина
Ecology, Natural Resources and Environment

4-ENRE-01

OPPORTUNITIES AND PROSPECTS FOR THE MASTER DEGREE OF EDUCATION OF SPECIALITY "ECOECONOMY"

Albena Miteva

University of National and World Economy,
Department "Economy of Natural Resources", Sofia, Bulgaria
albenakm@yahoo.com

A b s t r a c t: The master degree of speciality "Eco-economy" is taught in the University of National and World Economy since 2012. It is taught for the first time in Bulgaria and meets the community needs of economists with built ecological attitude towards the use of natural resources and environmental preservation. On the basis of the two years period of education are highlighted and presented in the paper the opportunities for enhancement the educational curriculum of the speciality.

Key words: speciality "Eco-economy", educational curriculum,

4-ENRE-02

PLANT AND ANIMAL WASTE – RESOURCES FOR BIOFUEL

Margarita Krasteva[1], Zaprjanka Shindarska[2]

[1]University of National and World Economy, Department Economy of Natural Resources, Sophia, Bulgaria
Forestry University
krastevab@abv.bg

A b s t r a c t: The UN Framework Agreement on climate change held in Kyoto agreed to reduce by 2012 the total emissions of CO2 and other greenhouse gases. Under this agreement, EU countries must reduce emissions by 8%. One means of achieving this level is to replace fossil fuels with renewable energy resources.

Based on data from chemical analysis was calculated the energy value of different resources for biofuel (wood - a waste product from forestry, energy crops, agricultural waste, manure, waste from food industry) and the results are presented in the paper.

Key words: biofuel, climate change

4-ENRE-03

TOXIC EFFECTS OF CADMIUM, DURING CHRONIC EXPOSURE, IN REPRODUCTION PARAMETERS OF FEMALE *CAVIA PORCELLUS*

Albana Munga, Dashamir Xhaxhiu, Dorjana Beqiraj, Jani Mavromati

Agricultural University of Tirana, Faculty of Veterinary Medicine, Department of Morphofunctional Subjects, Tirana, Albania.
albanamunga@yahoo.com

A b s t r a c t: Cadmium is a ubiquitous environmental pollutant of increasing worldwide concern. Cadmium accumulation occurs in various tissues and organs, with the most extensive accumulation in kidney cortex.

This study analyzes some of cadmium effects in reproduction parameters of the female *Cavia porcellus*. Cadmium was applied by intraperitoneal injections in doses of 0.0005 mg/kg/day, 0.1148 mg/kg/day and 0.2177 mg/kg/day to female mature *Cavia porcellus*. After 60 days, animals were killed and the samples of ovaries were prepared for optic microscope observations. The changes in the ovaries were compared with those of the healthy *Cavia porcellus*. The hormones secretion profile and cadmium accumulation were monitored weekly by analyzing blood samples.

The increasing of Cadmium dose applied results in many pronounced histological damages in the ovary. Among the histological damage recorded were high number of atretic follicula, arresting of their maturity, disruption of cell contacts, atrophy and disorganization of granulose cells, small corpus luteum with hemorrhagic processes, etc.

Increasing of cadmium concentration reduces the secretion rate of estradiol (r = –0.962), progesterone (r = –0.83), FSH (r = –0.962), and increases the secretion of testosterone (r = 0.98) and LH (r = 0.697).

Key words: cadmium; reproduction, ovary; gonadotropins; sexual steroides

4-ENRE-04

AN ASSESSMENT ON THE TROPHIC STATUS OF LAKE ĆELIJE, SERBIA

Slavica Ćirić[1], Božidar Milošević[1], Zvonko Spasić[1], Snežana Anđelković[2]

[1]*University of Priština, Faculty of Agriculture, Lešak, Serbia*
[2]*Institute for forage crops, Kruševac, Serbia*
slavica.ciric@open.telekom.rs

A b s t r a c t: Lake Ćelije is located in central Serbia, in the vicinity of the town of Kruševac. It serves as a source of drinking water. Due to the absence of any form of protection, anthropogenic influences have accelerated the eutrophication and lead to the establishment of toxic blue-green algae in the lake.

The aim of this study was to determine the trophic level of Lake Ćelije, in hydrological and thermal unfavorable year of 2011, after the entry of large amounts of phosphorus and almost complete destruction of planktonic communities.

The sampling of lake water was carried out at representative locations, at different depths. The concentrations of orthophosphates and total phosphorus, as well as chlorophyll "a" concentration were determined.

The total phosphorus had a relatively uniform concentration throughout the year. A large intake of phosphorus in the lake, in March, shows the dependence of the trophic status of the lake on the basin. Carlson's indexes for the total phosphorus were about 65. Indexes for the chlorophyll "a", which were considerably lower than the indexes for phosphorus, indicating incompletely realized trophic potential in 2011, which was largely the result of violations of phytoplankton in March.

Key words: lake; trophic status; total phosphorus; chlorophyll "a"

SLFH

5. Рибарство и аквакултура
Fishery and Aqaculture

5-FIAQ-01

SEASONAL VARIATION OF FATTY ACID COMPOSITION OF CHALCALBURNUS TARICHI IN VAN LAKE, TURKEY

Ozcan Baris Citil[1], Ahmet Cihat Oner[2]

[1]Department of Animal Nutrition, Faculty of Veterinary, Selcuk University, Konya, Turkey
[2]Department of Pharmacology and Toxicology, Faculty of Veterinary, Van University, Van, Turkey
ocitil@selcuk.edu.tr

A b s t r a c t: In this study, seasonal variations on total fatty acid composition of *Chalcalburnus tarichi*, muscle lipids in Van Lake were determined by gas chromatography. Fish samples in 2 seasons (summer and winter) were obtained from Van Lake in Van, Turkey. The results showed that polyunsaturated fatty acids levels were found to be higher than that of monounsaturated fatty acids in two seasons. Stearic acid levels were the highest in muscle 31.06% in winter. Arachidonic acid were at the highest levels in muscle 7.00% in summer. Linoleic acid (C18:2 n6), docosahexaenoic acid (C22:6 n3), eicosapentaenoic acid (C20:5 n3), and arachidonic acid (C20:4 n6) were at the highest levels among the PUFAs. The n-3:n-6 ratios in *Chalcalburnus tarichi* were 1.04 winter, respectively. In conclusion, seasonal variations affected fatty acid composition of *Chalcalburnus tarichi* in Van Lake.

Key words: fatty acid composition; seasonal variation; *Chalcalburnus tarichi*; Van Lake

5-FIAQ-02

PHYSIOLOGICAL STRESS RESPONSE OF BLACK SEA TROUT (*SALMO LABRAX* PALLAS, 1814) TO AN ACUTE THERMAL CHALLENGE

Zeynep Dengiz Balta[1], Süleyman Akhan[2]

[1]Rize University, Institute of Science, Dept. of Fisheries and Aquacult.
Rize, Türkiye
[2]Akdeniz University, Faculty of Fisheries,
Antalya Türkiye
akhan@akdeniz.edu.tr

A b s t r a c t: In this study, physiological stress response of Black Sea trout (*Salmo labrax*) (184.22±10 g main weight) to acute thermal shock was investigated. For this purposes, experimental fish were maintained at the 15 °C water temperature for 15 days. After maintenance, the experiment group was challenged to 25 °C water temperature acutely for 30 minutes. Samples were collected before and after acute thermal challenge (1^{st}, 3^{rd}, 6^{th}, 12^{th}, 24^{th}, 36^{th}, 48^{th} and 72^{nd} hours). Serum cortisol, lysozime activity, glucose, total protein, Ca, Na, Cl, K and P were determined in groups. Serum cortisol and glucose levels were significantly increased ($p < 0.05$) after acute thermal challenge. The serum glucose levels of the control group (average 12.80±1.2 mg/dl) was found lower than control (61.8±2.55 mg/dl) and also cortisol level was found lower in the unstressed fish (average 3.80±0.50 µg/dl) than those in stressed fish (average 30.19±0.89 µg/dl) at the first hour after treatment. But lysozime activity was significantly reduced ($p < 0.05$) in shock group by the time. Lysozime activity of the control group was detected higher (average 515.77±21 Unit/ml) than stressed fish (average 142.22±16 Unit/ml) at the 3^{rd} hours after last treatment. Serum total protein levels, Ca, Na, Cl, K and P were not affected. These physiological parameters indicated that Black Sea Trout are sensitive to acute thermal shock.

Key words: Black Sea trout; cortisol; lysosyme activity; heamatotology

5-FIAQ-03

THE PRESENCE OF TENCH – *TINCA TINCA* AND *ALLOCHTHONOUS FISH* SPECIES IN SOME WATERCOURSES OF VOJVODINA (SERBIA)

Jelena Lujić, Desanka Kostić, Miroslav Ćirković, Dragana Ljubojević

Faculty of Sciences, Department of Biology and Ecology,
Dositeja Obradovića Square No. 2, Novi Sad, Serbia
jelena.lujic@dbe.uns.ac.rs

A b s t r a c t: Based on the data obtained through complex ichthyological research in waters of Vojvodina in the last thirty years, the presence of tench – *Tinca tinca* was monitored, as well as the presence of the following allochthonous fish species: *Ictalurus nebulosus*, *Lepomis gibbosus*, *Carassius gibelio*, *Ctenopharyngodon idella*, *Aristichthys nobilis*, *Hypophthalmichthjs molitrix* and *Pseudorasbora parva* as an important disturbing factor of the above mentioned indigenous species. The results show significant decrease in number, and even extinction of tench, while the presence of imported species is increasing, especially brown bullhead, pumpkinseed sunfish and Prussian carp.

Key words: *Tinca tinca*; allochthonous fish species; Vojvodina (Serbia)

5-FIAQ-04

ANISAKIS SPECIES AT THE ADRIATIC SEA

Bejo Bizhga[1], Dritan Laçi[1], Vladimir Spaho[2]

[1]Agricultural University of Tirana, Faculty of Veterinary Medicine, Department of Veterinary Public Health, Tirana, Albania
[2]Faculty of Agricultural, Deparment of Animal Production, Tirana, Albania
bejobizhga@yahoo.com

A b s t r a c t: The *Anisakis* species, Dujardin 1845, (nematoda: *Anisakidae*) includes parasitic nematodes with complex life cycle. Larval stages can infect many marine and freshwater fish species. Larvae of anisakid nematodes are a potential human health threat, both as causative agents of anisakiasis and as food-borne allergens. The aim of the present study was to determine species of *Anisakis* spp. larvae found in fish from Adriatic Sea during 2011 in the Bay of Shengjin (Albania). We have been working in order to identify solution by Hartwich 1974. The samples were kept frozen until the finalization of the parasitological examination which was realized in the Laboratory of Veterinary Parasitology at Faculty of Veterinary Medicine, A. U. Tirana. For each sample was recorded length in cm, weight in grams, date and place of capture. *Anisakis* spp. larvae were found from 34 (27.6%) fish out of 123 samples from *Trachurus* spp. (*Trachurus trachurus*, Linnaeus, 1758 and *Trachurus mediterraneus*, Steindachner, 1868). *Anisakis* spp. larvae were found at 93% in the cavity and only 7 % in the filet. *Engraulis encrasicolus* Linnaeus, 1758 is a coastal pelagic and euryhaline species with a widespread distribution at Adriatic Sea. Infection larvae of *Anisakis* were found in 54 (60.6%) from 89 samples of *Engraulis encrasicolus*. The larvae was encysted on the external wall of intestine (88%), in reproductive organs (8%) and rarely in fillets (4%). *Merluccius merluccius*, Linnaeus, 1758, is a widespread species in the Adriatic Sea. We were examined 142 samples. We found Anisakis larvae in 93 samples (65.4%) of *Merluccius merluccius* included in this study. The most affected locality at *Merluccius merluccius results* the cavity with 87%. The presence of the larvae in the filet was 13%, a low percentage compared with other locations. During the indentifying process we indentified larvae of *A. pegreffii*, *A. typica* and *A. physeteris*. *A. pegreffii* which resulted widely spread in the Adriatic Sea (74%). A. physeteris and *A. typica* resulted spread in a very low percentage in *Merluccius merluccius*.

Key words: Anisakis; Engraulis encrasicolus; Trachurus spp.; Merluccius merluccius; Adriatic Sea.

5-FIAQ-05

DACTYLOGYRUS AND GYRODACTYLUS SPECIES IN FISH AT THE SCUTARI LAKE

Dritan Laçi, Bejo Bizhga, Rubin Piranaj, Ilirian Kumbe, Bledar Bejleri

Agricultural University of Tirana, Faculty of Veterinary Medicine, Tirana/Albania
dritan.laci@gmail.com

A b s t r a c t: This study was realized during 2011 in Scutari Lake and there were included all ichthyic species present in this lake. The samples were kept frozen until the finalization of the parasitological examination which was realized in the Laboratory of Veterinary Parasitology at Faculty of Veterinary Medicine. For each sample was recorded length in cm, weight in grams, date and place of capture. We differentiate *Dactylogyrus* spp. at *Carassius carassius*, *Phoxinus* spp., *Cyprinus carpio carpio*, *Carassius carassius* and *Paraphoxinus petrossi*. Differentiated *Gyrodactylus* spp. in Scutari Lake resulted to be viviparous. During the morphological diagnosis resulted *Gyrodactylus trutae* which was found in *Oncorhynchus mykiss* in the estuary of the rivers Cemit, Perroi i Thate and Moraqe. The place where the parasites were located was the body surface area of their spinal. *Gyrodactylus hypophthalmichthydis*, Lin Mo in 1962, was differentiating in the estuary of the rivers which flow in the Scutari Lake. The length of *Gyrodactylus hypophthalmichthydis* was varying between the limits 0.40 – 0.52 mm and the width was varying between the limits of 0.10 – 0.14 mm. Height of the thorns on the fixative disc ends resulted 0.020-0.025 mm. The overall length of median thorns resulted 0.064-0.066 mm. The *Gyrodactylus hypophthalmichthydis* were located in the fish body surface area and the base of dorsal fin.

Key words: *Dactylogyrus* spp.; *Gyrodactylus* spp.; fish; Scutari Lake

5-FIAQ-06

INFUENCE OF DIFFERENT WATER CHANGE RATES ON THE GROWTH OF RAINBOW TROUT

Rodne Nastova, Nedeljka Nikolova

Ss. Cyril and Methodius University in Skopje, Institute of Animal Science,
Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
rodne_nastova@yahoo.com

A b s t r a c t: The objective of the experiments which were conducted in the fish ponds of the Boshava fisheries – Kavadarci, R. Macedonia, was to investigate the influence of different numbers of water changes per day on the growth rate and food conversion.

Based on the results obtained the following conclusions can be drawn:

1. The weight growth rate was affected by the quantity of fish in the pond. The most favourable results were achieved with 72 water changes per day.

2. The length growth rate of fish was also affected by water flow but far less than the weight growth rate. The differences in the length growth rate of fish reared under the conditions of 40 and 72 water changes per day were insignificant.

3. The lowest value of food conversion was obtained with 72 water changes per day proving thereby that food was utilized most efficiently under these conditions. Mortality rate was lowest and had no effect on the overall fish production.

Key words: water; rainbow trait, Boshava fisheries, growth rate

ЕСАН

7. Економика во сточарството
Economics in Animal Husbandry

6-ECAH-01

STRATEGIES FOR RURAL DEVELOPMENT IN BULGARIA WITHIN THE LEADER APPROACH

Zornitsa Stoyanova

University of National and World Economy,
,1700, Studentski grad, Sofia, Bulgaria
zori_stojanowa@yahoo.de

A b s t r a c t: The LEADER approach is integrated within the EU policy for rural areas since 2007. Each program for rural development must have component Leader for leading development strategies.

The purpose of the paper is to evaluate the preparation of strategies for rural development and on this base to make generalized conclusions about the problems that have Local active groups (LAGs) in preparing their strategies and proposals related to the implementation of the projects included in local development strategies.

The first part of the paper presents the LEADER approach and the budget of measure 4.1. "Implementing local development strategies" from Program for development of rural areas 2007–2013.

In the second part of the paper on the base of survey is evaluated the preparation of local development strategies. On this basis are made generalized conclusions about the problems that have LAGs by preparing strategies for rural development and are made proposals relating to the implementation of projects included in them.

Key words: local active group; strategy; rural development

6-ECAH-02

PROBLEMS IN THE ORGANIZATION OF THE SYSTEM FOR FINANCIAL MANAGEMENT AND CONTROL IN THE STATE RESERVE AND WAR-TIME STOCK STATE AGENCY

Anton Marinov

Academy of the Ministry of Interior,
1 Al. Malinov Blvd., 1715 Sofia, Bulgaria
antonmarinow@abv.bg

A b s t r a c t: Democratic changes have affected all aspects of life during recent years and have led to a reform in the way financial control is applied in the public sector in Bulgaria.

The purpose of the current research paper is to analyze the system for financial management and control (SFMC) in the State Reserve (SR) and War-time Stock (WTS) State Agency and to pinpoint the problems that arise during the process of its functioning as well as to develop certain measures for its good financial management.

The article reviews the essentials of the systems for financial management and control in the public sector as well as SFMC's structure, organization, and functioning at the SR WTS State Agency. The conducted research also presents various results and conclusions.

The correctly functioning system of FMC provides reasonable confidence that the organization's aims are going to be accomplished by adhering to the principles of lawfulness, good financial management, and transparency.

Key words: financial management; financial control; public sector; Bulgaria

6-ECAH-03

THE DEVELOPMENT, PROBLEMS AND SOLUTION PROPOSALS OF LAYING HEN SECTOR IN TURKEY

Vecdi Demircan, Hasan Yilmaz, Hacer Celik Ates, M. Çagla Ormeci Kart

Department of Agricultural Economics, Faculty of Agriculture,
Süleyman Demirel University,
Isparta-Turkey
vecdidemircan@sdu.edu.tr

A b s t r a c t: This paper introduces the current situation and future development of the laying hen sector in Turkey, identifying and offering solutions to sectoral problems. Egg production in Turkey was 384 930 tonnes in 1990, and increased by 92.25% to 740 024 tonnes in 2010. Although annual egg consumption in Turkey exceeds the world average (8.9 kg/person/year), it would be right to state that it is not at the optimum level in comparison with the developed countries. In 2010, Turkey ranked 6th, with egg exports valued at approximately 156.2 million dollars. Turkey's primary export market is Iraq, representing almost 72%. It has been calculated that the increase in the retail price of an egg was at about 50% and increase in the production cost of an egg was 71.11% in the period of 2007–2011. The principal problems of the laying egg sector in Turkey are: high costs, breeding animal, feed, external dependence on vaccine and medicine, epidemics, the lack of any production planning and inefficient consumption of egg products.

Key words: Laying hen; production; trade; consumption; problems

6-ECAH-04

GOOD PRACTICES FOR SUSTAINABILITY OF RURAL AREAS IN BULGARIA

Hristina Harizanova

University of National and World Economy, Department Natural Resourses
Sofia, Bulgaria
hharizanova@unwe.acad.bg

A b s t r a c t: Changes in agricultural sector policies are crucial to reach successful rural development in Bulgaria. Scientific and practical interests are the main factors which lead to changes in current agricultural policy for the next programming period. The main aim of the paper is to evaluate the best practices of their implementation up to date. Rural. Development and funds should comply with appropriate best practices for sustainability. By adjustment of policies and measures Bulgaria, can achieve sustainable positive development in all sectors. The paper includes and evaluation of main factors which affects rural development in Bulgaria. Assessment of factors influencing rural development in Bulgaria is very important to target resources to overcome the negative impacts and enhance positive effects of some of the factors for sustainable development. On this base are proposed general conclusions for changes in agricultural policy.

The paper is based on results from research conducted by experts in the field of agricultural policy.

Key words: agricultural sector; best practises; sustainability

7. Општи теми
Open topic

ОРТО

7-OPTO–01

THE ESTIMATION OF THREE METHODS FOR PLATELETS COUNT

Elenica Dimço, Jetmira Abeshi, Erinda Lika, Gerta Dhamo, Rezart Postoli

Faculty of Veterinary Medicine, Agricultural University of Tirana, Albania
elenicadimco@hotmail.com

A b s t r a c t: Accurate platelets count is important in clinical practice to facilitate diagnostic and prophylactic procedures for hemostatic abnormalities. In this study, we compared the three platelet count estimation methodologies in 67 samples blood dog.

The traditional estimation method consisted of average number of platelets per oil immersion field, in a count of ten oil fields, multiplied by 20000.

Through the alternate estimation method, the number of platelets per 1000 erythrocytes in a stained blood film was multiplied by the automated RBC count, to give an approximate platelets count.

The automated count was performed using the hematology analyzer Mindray BC-2800Vet.

T-test was used for comparison of the methods. After the results were compared between two manual methods and each of these methods with the automated count, no significant differences were found in the platelets count (P□0.05).

The results of the study suggest that the automated hematology analyzer readings are as reliable as the standard manual methods. The application of manual methods with blood film has proved to be a reliable estimation of platelets in normal or thrombocytopenic states and also gives additional diagnostic information through the blood pictures.

Key words: platelet count; manual method; hematology analyzer; blood film

7-OPTO–02

THE COMPARISON OF HEMATOLOGIC EFFECTS OF THIOPENTAL AND KETAMINE IN DOGS

Erinda Lika, Paskal Gjino, Elenica Dimço, Jetmira Abeshi, Gerta Dhamo, Esmeralda Sotiri

Faculty of Veterinary Medicine, Agricultural University of Tirana, Albania
eklarisalika@yahoo.com

A b s t r a c t: This study compares the hematologic properties of the injectable anesthetic agents, thiopental and ketamine in dogs.

This study was performed in 58 dogs in the clinical of Veterinary Medicine Faculty and in some others vet private clinic in Tirana district, during the period from January 2010 - January 2012. The selected dogs were of different breed, ages and sex. Before the injection of the selected injectable anesthetics (Thiopental, Ketamine) we took their blood samples for laboratory test. All the selected dogs were in healthy conditions (ASA I).

We took blood samples before anesthetics injections and 20 minutes after anesthetics injections. After blood test results we concluded that thiopental decreases packed cell volume (PCV) and leukocyte numbers, whereas the change in total protein was variable. The fall in PCV is thought to be due to splenic sequestration of red blood cells. Plasma volume was increased, with an increase probably reflective of changes in systemic arterial pressure, with a decrease in arterial pressure causing an increase in capillary hydrostatic pressure and movement of fluid into the circulation. The hematologic effects following ketamine have resulted with decrease in PCV. PCV decrease was smaller following ketamine than thiopental.

Key words: thiopental; ketamine; hematologic effects; PCV

7-OPTO–03

ARTIFACTUAL CHANGES IN CANINE BLOOD FOLLOWING STORAGE, DETECTED WITH MANUAL METHOD AND HAEMATOLOGY ANALYZER

Jetmira Abeshi, Elenica Dimco, Gerta Dhamo, Erinda Lika, Luljeta Dhaskali

Universiteti Bujqesor, Fakulteti Mjeksise Veterinare,
Koder Kamez, Tirane, Albania
abeshijetmira@yahoo.com

A b s t r a c t: The haematologic examinations are very important for the evaluation of the physiological situation and for the diagnosis of different pathologies in the pet animals.The objective of this study is to evaluate the artifactualechanges that happen indogs'blood , stored for several hours in room conditions and in refrigerators. The blood samples were taken from 10 healthy dogs from the cephalicvein and were collected into EDTA.

The evaluation of haematological parameters (CBS), were done by using manual methods and with hematology analyzer "Mindray BC-2800 VET". The blood was examinedwithin 1 hour after blood sample collection and at 12, 24, 36 and 48 hours after storage of the samples at either 5oCor room temperature (approximately 20oC).Test results showed that MCHC values were significantly decreased in both conserving temperatures, for the examinations done 12,24,36,48 hours after sampling. The values of HCT and MCV were significantlyincreased 12 hours after sampling according to both methods used. The values continue to increase until 48 hours after sampling of blood. The HCT, MCV and MCHC resultsshowed that the most significant changeswere measured in the samples stored in the temperature (20oC), rather than the ones stored in (5oC), during all the intervalsof time and with both evaluation methods. A significant decrease in mean platelet componentconcentrationwere shown in the samples stored in 20 oC, during all the interval of the time and in both methods. The samples stored in 20 oC, had the highest percentage of normocytic-hypochromic erythrocytes,macrocrocytic-normochromic erythrocyte,and a very low percentage of platels and white blood cells.A delayed procedure in the performing of blood analysis can produces artifactual changes in CBC results.

Key words: haematology; CBC; RBC; Delayed analysis; dog

7-OPTO–04

BEEKEEPING IN TURKEY: PRESENT STATUS AND PROBLEMS

Fehmi Gürel, Bahar Argun Karslı

Akdeniz University, Faculty of Agriculture, Department of Animal Science,
07070 Antalya, Turkey
fgurel@akdeniz.edu.tr

A b s t r a c t: Turkey is situated in the heart of the Old World, where honey bees had evolved and has a great beekeeping potential with natural plant cover, different flowing seasons and wide range of climatic conditions. Important honey sources are sunflower, cotton, anise, citrus and chestnut trees and mountain plants such as thyme, milkvetch, sage, thistles. Turkey is the largest producer and exporter of pine honey in the world. There are approximately 5 million honey bee colonies and the honey production is around 75 000 tones a year in Turkey. It is included among the countries with the highest density of beehives in the world. However the honey production per colony is less compared to many countries. The average honey yield is around 15 kg/colony. Bee diseases and parasites, insufficient queen production, lack of knowledge and beekeeping organizations, the quality and marketing problems of bee products are main difficulties in Turkey beekeeping sector.

Key words: Beekeeping in Turkey; honey bee; bee products

7-OPTO–05

HAEMOBARTONELLOSIS IN CAT IN TIRANA

Gerta Dhamo, Dhimiter Rapti, Elenica Dimço, Erinda Lika, Jetmira Abeshi

Department of Clinical Subject, Faculty of Veterinary Medicine, Agricultural University, Tirana, Albania
gertadhamo@yahoo.com

A b s t r a c t: The objective of this study was to evaluate the clinical cases of haemobartonellosis diagnosed in some clinic of Tirana city, with a view to establishing the clinical signs and response to treatment. In these study we taken five cases of feline haemobartenellosis (FH), in which anaemia and high fever had been the predominant presenting symptoms. FH was diagnosed on the basis of blood smear with Giemsa type stain. Blood samples were withdrawn before treatment (day 0) and after treatment (day 26). The abnormalities found on routine haematological examination were a mild normocytic normochromic regenerative anaemia (cat 1 and cat 2), normocytic-hypochromic anaemia (cat 3) and macrocytic-normochromic anaemia (cat 4 and cat 5), mild eosinophilia (12% in cat 1 and 11.5% in cat 4) and monocytosis (5.5% in cat 1 and 11.5% in cat 3). All of the present cats were treated with doxycycline (Ranoxan®) at a dose of 5-10 mg/kg, per os for 21 days. Clinical recovery and disappearence of H.felis organisms was observed on day 29. HF has previously not been reported in Tirana.

Key words: Feline haemobartonellosis; Giemsa, Doxycycline; Blood parameters; treatment

7-OPTO–06

SEROLOGIC SURVEY OF CPV-2 IN STRAY DOGS OF TIRANA, ALBANIA

Ilir Kusi, Simon Bizhga

Faculty of Veterinary Medicine, Department of Clinical Sciences,
Agricultural University of Tirana,
Tirana, Albania
kusi_ilir@hotmail.com

A b s t r a c t: The study was carried out in 73 sera collected from stray dogs in Tirana, all tested by hemaglutination inhibition (HI) test for the detection of antibodies against CPV-2. In every test it were employed 0.5% pig red blood cells (RBCs). Strays were brought into the small animal clinic of the Faculty of Veterinary Medicine (FMV), Agricultural University of Tirana, to be spayed and neutered with respect to a joint project between the FMV and the Municipality of Tirana for the control of stray dogs in Tirana. All stray dogs involved in the study had CPV-2 antibodies, resulting in a 100% seroprevalence. This seroprevalence found here showed that the CPV-2 infection in the population of stray dogs, at least in Tirana, was widespread in almost every dog. Such a fact does best support the general idea that stray dogs are a major permanent source of spread of infection in owned dogs. In this study, although in a relatively limited number of dogs (73), they all regardless age, sex and HI titers, contracted the CPV-2 infection. Based on the data of this study, it is not difficult to say that stray dogs are way beyond any control and thus are a potential source of infectious disease transmission, including CPV-2, to pet dogs.

Key words: serology; canine parvovirus type 2; hemaglutination inhibition test; stray dogs; virology

7-OPTO–07

BIOCHEMICAL STRUCTURES OF BEE VENOM AND ROYAL JELLY

Kemal Karabağ[1], Sezai Alkan[2]

[1]Akdeniz University Faculty of Agriculture Department of Agricultural Biotechnology, Antalya, 07058, Türkiye
[2]Akdeniz University Faculty of Agriculture Department of Animal Science, Antalya, 07058, Türkiye
karabag@akdeniz.edu.tr

A b s t r a c t: Bee venom and royal jelly are two important natural compounds used in apitherapy. Bee venom is produced in venom glands of worker bees and store in venom sac. It has light colored, pungent and bitter taste. Bee venom contains 88% water, however, it has active ingredient at least 18 important pharmacological. The most important of them is melittin which has a polypeptide structure and the chemical structure of venom make up approximately 50% of the melittin. Bee venom is composed of the enzymes (phosplipase A2, hyaluronidase, acid phosohomonoesterase, glucosidase, hysophospholipase), proteins (melittin, apamine, MCD=Mast Cell Degrabulating Peptide, secapin, procamine, adolapin, protease inhibitor, tertiapin, <5 the structure of small-molecule amino acids), amines (histamine, dopamine, noradrenaline), minerals (sulfur, phosphorus, magnesium, copper, calcium), some of the tab downloads (glucose and fructose), and phospholipids with the alarm pheromones.

Royal jelly has high nutritional value is secreted from hypopharyngeal of 5-10 days old worker bees and is used for feeding queen and all larvae at young age. Royal jelly is pearl-colored, jelly-like, sour, 1.1 g/cm specific gravity and strong acids (pH:3-4). Royal jelly contains approximately 66% water, 12-14% crude protein, 11-13% simple sugars, 5-6% fatty acids, 1% trace minerals, enzymes, antibacterial and antibiotic.

Key words: bee venom; Royal lelly; chemical structure; queen larvae

7-OPTO–08

BIOCHEMISTRY STUDY OF DOGS NATURALLY INFECTED WITH BABESIA

Rezart Postoli, Egon Andoni, Dhimitër Rapti, Enkeleda Ozuni

Faculty of Veterinary Medicine, Agricultural University of Tirana, Albania
rpostoli@yahoo.com

A b s t r a c t: Canine babesiosis is caused by the intra-erythrocytes haemoprotozoan parasite of the genus Babesia. The dogs were presents in the clinic of Small Animal at the Veterinary Faculty of Tirana, during the period February 2011-February 2012. Plasma was separated for the evaluation of blood chemistry parameters. The serum biochemistry included Blood Urea Nitrogen (BUN), Creatinine, Total protein, Albumin, Asparate amino Transferase (AST), Alanine amino Transferase (ALT), Alkaline Phosphatase (ALP). These values were measured by automated clinical chemistry analyzer using standard kits. Only in one case which was classified as complicated babesiosis there was elevated ratio of ALP and Creatinine. The elevated creatinine was significantly higher (mean 35%) than of those with normal creatinine (mean 22%). The elevated serum urea and the increase of serum creatinine are possible of decreased blood pressure or hypovolaemia.

Key words: Canine babesiosis; haemoprotozoan parasite; serum biochemistry; serum urea

7-OPTO–09

A RETROSPECTIVE STUDY OF HEMATOLOGIC CHANGES IN DOGS WITH BABESIA

Rezart Postoli, Egon Andoni, Pëllumb Zalla, Kastriot Belegu, Enkeleda Ozuni

Faculty of Veterinary Medicine, Agricultural University of Tirana, Albania
rpostoli@yahoo.com

A b s t r a c t: Canine babesiosis caused by tick-borne organisms of the genus Babesia, is one of the most significant disease worldwide. The aims of this study were to determine the hematological changes in six dogs naturally infected with Babesia canis. The hematological evaluation included Hemoglobin (Hb), Red Blood Cell (RBC), Platelet, Packet Cell Volume (PCV), Mean Corpuscular Volume (MCV), Mean Corpuscular Hemoglobin Concentration (MCHC) and Reticulocyte counts. They were estimated using an autonomic hematologic analyzer. The animal had hypocytic hypochromic anemia and 20% of the cases had a packed cell volume (PCV) less of 24%. All animals had thrombocytopenia and platelets counts were lower than 50x103 cell/ µl.

Key words: Babesia canis; hematology; tick-borne; anemia

7-OPTO–10

GASTOINTESTINAL HELMINTS OF GOATS BREEDING AT STARA PLANA AREA (SERBIA)

Ivan Pavlović, Snežana Ivanović, Dubravka Jovičić, Gordana Žugić, Srđan Jovčevski, Stefan Jovcevski

[1]Scientific Veterinary Institute of Serbia, 11000 Belgrade, V, Toze 14, Serba
[2]Faculty Futura, University Singidunum, Belgrade, Serbia
[3]Medicines and Medical Devices Agency of Serbia, Belgrade, Serbia
[4]Veterinarna Clinic " I N O - V E T " Kumanovo, R. Macedonia
[5]Faculty of Veterinary Medicine, Skopje, R. Macedonia
dr_ivanp@yahoo.com

A b s t r a c t: Goats population in Serbia had a drastical decrease after II WW, but in last decade were stared to anew increase of its population espacialy at mautntain areas. Pasture breeding make possible contact within goats and eggs, larvae stages and intermediate host of parasites. Those induce that there are no one goats without parasites. Examination of helminth fauna of goats were only sporadicly performed in Serbia and from these reasoni in mind, we started with those examination at warious pats of Serbia. At first, we started at Stara planina.

During our examination we examined 21 flocks of goats originated from 7 vilages from Stara Planina. Using standart coprological methods we examined 221 faecal samples. A total of 71 goats and lambs were examined after slough. We revealed same gastointestinal helmints: Ostertagia circumcincta (100%), O.trifurcata (95,23%),O.ostertagi (33,33%), Trchostrongylus axei (100%), T.colubriformis (90,47%),T.capricola (42,85%), T.vitrinus (85,71%), Nematodirus filicolis (47,61%), N.spathiger (100%), N.abnormalis (19,04%), Hameonchus contortus (80,95%), Marshallagia marshalli (28,57%), Skrjabinema caprae (23,08%), Chabertia ovina (57,14%),Oesophagostomum venulosum (38,09%), and Bunostomim trigonocephalum (14,28%)

Acknowledgements: The research was done within the project TR 31053, "Implementation of new biotechnological solutions in breeding of cattle, sheep and goats for the purpose of obtaining biologically valuable and safe food", funded by the Ministry of Education and of the Republic of Serbia.

Key words: helmints; goats; Stara Planina; larvae stages

7-OPTO–11

SHEEP SCABIES SUPRESSION

Zorica Novaković[1], Sofija Katić-Radivojević[2], Cvijan Mekić[3]

[1]Ministry of Agriculture, Trade, Forestry and Water management of Republic of Serbia, Belgrade, Serbia
[2]Faculty of Veterinary medicine, Belgrade, Serbia
[3]Faculty of Agriculture, Zemun, Belgrade, Serbia
drnovakovicz@gmail.com

A b s t r a c t: Scabies is contagious chronic parasitic skin infection of all breeds of domestic animals including sheep. Scabies causes great direct and indirect damages.

Parasite life cycle is connected explicitly to the host.

The sources of infection are infected animals and contaminated objects.

Development of skin changes depends on body resistance. Compared to animals with weaker immunity, animals that have good immunity scabies develops harder or does not develop at all.

Sheep scabies is caused by parasite Psoroptes equi var.ovis, sarcoptes scabici var. ovis and Horioptes bovis var. ovis.

Parasite irritates the surface of the skin, causing local inflammation and light itch. Sheep usually scratch on different objects, they bite themselves therefore skin inflammation spreads, on those infected surfaces the wool falls off.

Scabies usually remains on places where sun light does not reach. Infection usually appears at winter and early spring.

Clinical diagnosis is set based on anamnesis and findings in the skin of infected sheep.

Therapy is conducted by bathing the sheared sheep in water solution of acaricide, twice in intervals of 7 to 10 days and with subcutaneous application of anti parasitic which systematically affects the mites.

Key words: sheep; scabies; therapy

7-OPTO–12

PRELEMINARY DATA ON FELINE IMMUNODEFICIENCY VIRUS (FIV) IN TIRANA, ALBANIA

Ilir Kusi[1], Rezart Postoli[1], Dorina Shtembari[2], Enstela Shukullari[1], Dhimiter Rapti[1]

[1]Department of Clinical Sciences, Faculty of Veterinary Medicine,
Agricultural University of Tirana,
Tirana, Albania
[2]Private practitioner
kusi_ilir@homail.com

A b s t r a c t: From January 2012 to currently, out of 30 cats tested by Bio Veto Test Speed Duo FeLV/FIV, Virbac, France, 9 of them resulted FIV antibody positive. To date no cats were found FeLV positive. All cats tested were sexually intact and had mainly an outdoor lifestyle encouraging their owners to bring the cats in for FIV/FeLV testing free of charge. Of FIV positive cats, 6 were intact male and 3 female with a male/female ratio of 2:1. The age of FIV positive cats varied from 2 to 9 years old with the mean age of 5.7 years old. When euthanasia of a FIV positive cat was carried out upon the consent of the owner, the pathologic findings were recorded. Further studies are on the way.

Key words: FIV; FeLV; serologic prevalence; cat; gross pathology

7-OPTO–13

ULTRASONOGRAPHIC FETOMETRY IN BOVINE FETUSES

Bledar Bejleri, Dritan Laçi

Agricultural University of Tirana, Faculty of Veterinary Medicine,
Department of Clinical Matters, Department of Veterinary Public Health,
Tirana, Albania,
bledibejleri@yahoo.com

A b s t r a c t: The purpose of this study was to define the ultrasonographic biometric parameters of various body parts of bovine fetuses. In this study were included 30 primipare and multipare cattle in various stages of pregnancy. A series of ultrasound examinations were conducted for measurement of different body parts of fetuses. During the study the ultrasound examinations were performed once a week between weeks 4 and 8 of pregnancy and with two week interval between week 8 and 42 of pregnancy. The earliest time of detection of the embryo and AV (amniotic vesicle) were recorded. The time of embryonic organization was determined by visualization of the embryo's head, body and limbs formation. Fetal bones development was determined when an increase in echogenicity. In each ultrasound examination the following fetometric parameters were: sacrum head length (CRL), amniotic vesicle diameter (AVD), uterine diameter (UTD), biparietal diameter (BPD), chest depth (CHD), abdominal diameter (ABD), rumen length (RUL), omasal diameter (OMD), eye bulb diameter (EBD) and placentome diameter (PLD). To assess the relation between age and each gestational body parameter was used the study of regression and correlation patterns. In conclusion, the overall data indicated the feasibility of ultrasonographic fetometry study in cattle for evaluation of fetal development and estimation of gestational age.

Key words: ultrasonographi; fetometry; examination

7-OPTO–14

SOME MORPHOLOGICAL TRAITS OF MALAKAN HORSES IN TURKEY

Orhan Yilmaz[1], Saim Boztepe[3], Mehmet Ertugrul[2]

[1]Igdir University, Faculty of Agriculture, Department of Animal Science, 76100, Igdir – Turkey
[2]Selcuk University, Faculty of Agriculture, Department of Animal Science, 42110, Konya – Turkey
[3]Ankara University, Faculty of Agriculture, Department of Animal Science, 06110, Ankara – Turkey
zileliorhan@gmail.com

A b s t r a c t: This study was conducted to define the morphological traits affected by sex, region, coat colour, and age. In this study 57 male and 49 female horses were used in four age groups (3-4, 5-6, 7-8 and 9-15 years). Descriptive statistics gave the following means: withers height 142.9±0.48 cm, height at rump 142.0±0.46 cm, body length 146.1±0.79 cm, heart girth circumference 163.2±1.09 cm, chest depth 56.4±0.38 cm, chest width 43.9±0.41 cm, cannon circumference 19.1±0.16 cm, head length 56.4±0.38 cm and ear length 12.8±0.16 cm. In this study the frequencies of body coat colour of the sampled horses were bay 45.3%, gray 37.7%, chestnut 6.6%, black 4.7%, isabelline 2.8%, and buckskin 2.8%. It can be said that in Turkey the only draft horse breed is the Malakan horse which is raised in the East of Turkey.

Key words: Horse; body measurement; coat colour; genetic resource.

7-OPTO–15

SOME PHENOTYPIC CHARACTERISTICS OF TURKISH KANGAL (KARABASH) DOGS RAISED IN EUROPE

Orhan Yilmaz[1], Mehmet Ertugrul[2]

[1]Igdir University, Faculty of Agriculture, Department of Animal Science, 76100, Igdir, Turkey
[2]Ankara University, Faculty of Agriculture, Department of Animal Science, 06110, Ankara, Turkey
zileliorhan@gmail.com

A b s t r a c t: This study was carried out to determine some phenotypic traits of Turkish Kangal (Karabash) Shepherd Dogs raised in Belgium, France, Germany and Slovenia comparing them with certain other breeds from different countries. To this end, a total of 39 (18 male and 21 female) dogs were analyzed with the Minitab 15 statistical software program using ANOVA and Student's T-Test. Descriptive statistics were for live weight 50.5 kg, withers height 76.8, height at rump 76.1, body length 67.3, chest width 21.7, limb length 43.1, head length 29.4 and ear length 12.7 cm respectively. The overall results of the study demonstrated that Turkish Kangal (Karabash) Shepherd Dogs raised in Belgium, France, Germany and Slovenia had a very close resemblance to dogs raised in the UK and USA, but that they were larger than the dogs raised in Turkey. In Europe the dogs reach mature body weight and size at around 2 years of age. The overall results of the current study revealed that the Turkish Kangal Dogs raised abroad were larger because of better life conditions.

Key words: Shepherd dog; morphological trait; body measurement; genetic resource

7-OPTO–16

RESEARCH ON SOME REPRODUCTIVE PARAMETERS IN WHITE NEW ZEALAND AND CALIFORNIAN DOES

Krasimir Velikov, Maya Ignatova

Institute of animal science
Kostinbrod, Bulgaria
sherry_bg@abv.bg

A b s t r a c t: The aim of the present research is to determine what is the average duration of pregnancy, the relative number of variants in each sequence of pregnancy to detect some correlation between the sequence and duration of pregnancy and reduction of the fertility of does in each sequence comparing the two breeds in these parameters.

Based on this study, we come to some conclusions. The duration of pregnancy in both breeds most often lasts 31 or 32 days in New Zealand white does, the average duration of pregnancy is lower than California does. In New Zealand white does relative number of variance for a period of 30 days is greater than 33 days duration for each sequence, and in Californian-it is the opposite. The reduction of fertility in each successive pregnancy becomes more smooth in does of breed White New Zealand rabbit compared with those of the Californian rabbit.

Key words: rabbit; pregnancy; amortization; duration; Californian; white; new; zealand

7-OPTO–17

STRUCTURAL CHANGE OF ANIMAL HUSBANDRY IN TURKEY BETWEEN 1950 AND 2010

Y. Erdal Erturk[1], Orhan Yilmaz[2]

[1]Igdir University, Faculty of Agriculture, Department of Agricultural Economics, 76100, Igdir, Turkey
[2]Igdir University, Faculty of Agriculture, Department of Animal Science, 76100, Igdir, Turkey
erdal.erturk@igdir.edu.tr

A b s t r a c t: Since 1950 agriculture in Turkey has had a rapid changing process. Mechanization has decreased and arable lands have expanded to maximum limits. An excess employment has happened by using new modern agricultural techniques in rural area and then a human migration has started from rural areas to urban areas. This process has effected animal production as much as vegetable production. There is a process of transition from a traditional smallholder and multiple ways production for their self consumes to specialized smallholders which target to provide raw material for developing food industry. In this study a structural changes of animal farms, policies which determines effective factors of those changes and other factors were studied.

Key words: mechanization; human migration; animal production; smallholder; agricultural policies

7-OPTO–18

AN OVERVIEW ON THE PRESENT CONDITION AND PERSPECTIVES ON THE PRODUCTION, CONSUMPTION AND RESEARCH POTENTIONAL OF THE RICE CULTURE IN REPUBLIC OF MACEDONIA

Mirjana Menkovska [1], Danica Andreevska [2], Dobre Andov [2]

[1] Ss. Cyril and Methodius University in Skopje, Institute of Animal Science, Blwd. Ilinden, 92a, 1000, Skopje, Republic of Macedonia
[2]Ss Cyril and Methodius University in Skopje, Agricultural Institute, Skopje
danicaandreevska@yahoo.com

A b s t r a c t: This study represent an overview on the production, consumption and a part of the research work done on rice in Republic of Macedonia.

Through a few centuries the rice is a traditional cereal in Macedonia. The rice production on the area of around 4000 ha and yield of 5000 kg/ha is mainly concentrated in the Eastern Part of Macedonia along the course of the river Bregalnica in the regions of Kochani, Shtip, Vinica and Blatec. It is also represented on smaller arreas in the region of Veles and Probishtip.

The major part of the produced rice (white, brown and parboiled) is mainly used as food, so that the annually rice consumtion is 7,2 kg per inhabitant. The rice is also used as a raw material in industry of starch, alcocol and alcocolic drinks, as well as in cosmetics.

The straw as a by product of rice production is used as dip litter in the livestock growing, for compost preparing in the muchroom production and as a supastrat with the greenhouse production of the cucumbers.

The secondary products that are obtained during the rice processing-becoming white of the crude rice-paddy into white rice (rice hulls and bran-chaffs) mainly are used as feed, and represent raw materials in the oil industry.

The research work on rice in Macedonia in the past as well as now a days, is directed first of all towards to the breeding of new rice varieties, production of the certificated seed material, research on the mineral nutrition, control of chaffs, pests and diseases, as well as following the quality of the consumed rice.

The following domestic rice varieties were bred: no. 69, no.-51, biser-2, osogovka, kochanski, nada-115, ranka, prima riska and montesa and introduced and regional Italian varieties:montocheli, R-76/6, san andrea, drago and baldo.

The main limiting factor in the future rice production in Macedonia should be water shortage for irrigation and shortage of the cultivable growing soil area, as a result of the expansion of the urban environment.

Key words: rice; production; consumption; varieties; seed; quailty

8. Студентска секција
Students section

STSE

8–STSE–01

RESEARCH ON THE BEHAVIOR OF ALBANIAN YOUTH PEOPLE IN RURAL AREAS TO SELF -EMPLOYMENT

Enida Kume

PhD student, Faculty of Sociology Science, University of Tirana, Albania
enidak@gmail.com

Abstract: Policy development and implementation of the progams that enable the growing interest of young people to live and work in rural areas is one of the priorities of the Strategy for Sustainable Rural Development in Albania. Employment and implementation of conditions that are necessary for a better life, are the main factors that constrain the growth of this interest.

Interviews with 242 young people who currently live in rural areas, about 62.8% stated that they want to leave the village and to find jobs and housing opportunities in urban areas, within or outside the country. About 73.4% of the youth who do not want to leave rural areas, consider self-employment as a better alternative. Among them 53.8% with self-employment understanding work in family farm. 46.2% stated that it would be self-employed in non-agricultural activities, 46.2% stated that it would be self-employed in non agricultural activities, such as service or commercial activities, animal or crop productions processing, agro-tourism, etc. Alternatives to self-employment often faced with young people aged 20-25 years (68.3%), among young boys (72.5%) and to youth who have committed secondary vocational education (62.3%). Young people aged 25-30 years are more optimistic and persevering in business development as self-employment activity. Only about 25.5% of young people wishing to self-employed in non-agricultural activities were also expressed that they have financial possibilities to start the business. About 78.4% have no information about how they can use the other alternative options for financing their business. About 68.5% stated that their request for a financial credit has been given a negative response. By young people interviewed about 72.6% stated that they did not have information on public policies and programs in support of their employment. Subsidies by public funds for development of traditional farms, activities in non-agricultural sectors, in particular for the production, processing and marketing of traditional products and development of agro-tourism about 85.8% of young people consider a necessity.

The study showed that: (i)encourage youth to live and work in rural areas requires that developed and implemented social-economic development programs, the focus of which should be the interests of young people, (ii) development of economic tools and financial mechanisms to support youth initiatives for self-employment, informing and increase access for youth people to these mechanisms, as well as subsidies for their initiatives, are the important factors affecting the growth of interest among the youth, to live and work in rural areas.

Key words: Youth people, Rural areas, Self-employmen

8-STSE–02

ABOUT THE LEGAL FRAMEWORK FOR *EX-SITU* CONSERVATION OF FARM ANIMAL GENETIC RESOURCES IN ALBANIA

Andon Kume

PhD student, Faculty of Law, University of Maçerata, Italy
andon.kume@gmail.com

Abstract: The Albanian National Action Plan for FAnGR defines the *Ex-situ* conservation of local/native animal breeds as the main priorities. The law "On Livestock Breeding" serves as the legal base for implementation the actions that are foreseen in National Action Plan. In this Act the establishment of gene banks for cryoconservation and/or *ex-situ in vivo* conservation of local breeds at risk of extinction will be foreseen to implement. While it should be noted that the Albanian legislation does not cover issues related to the right of ownership and use of the materials that are stored in the Cryobank and *Ex-situ in vivo* Genebank. Till today it is treated and considered as a public asset. The establishment and the administration of the Cryobank and *Ex-situ in vivo* Conservation Bank, is defines as a duty and the right of the public institutions. In Albanian legislation lacks the necessary legal framework to regulate the relations between stakeholders and other actors, also lacks the specific legal framework on which bases are to be developed the transboundary and/or regional issues regarding the exchange the genetic material. The legal and regulatory framework that should contain the entirety of the storage conditions and documentations, like as storage facilities and rules, data management and documentations, gene bank security, special sanitary arrangement and legal issues related to genetic material and data, ownership and IP, collecting new materials and access to Gene Bank should be developed. Given the lack of necessary infrastructure and human capacities for collect and management the semen, ovocytes and embryo, the establishment of the Genetic Bank for somatic cells conservation will be implemented. The compilation of the necessary legal framework for establishment this somatic cells gene bank, its management, ownership rights and the veterinary rules that should be implemented during collection, handling and storage of biologic materials, should be elaborated as an important part of the legal framework.

Key words: Animal genetic resources, *ex-situ* conservation, legislation, Albania

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