Abstracts
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AQUACULTURE

Abstract

The aim of the paper was the study of embryos survival rate after eggs triploidy treatment in rainbow trout (*Oncorhynchus mykiss* Walbaum). The triploidy induction was preformed during the cold period of January when the water temperature reached 8-10°C and the environmental conditions inducted the natural reproduction of rainbow trout. The reproducers used for the experiments were between 3-5 years old. The spawn fertilization was made by the wet method. For each experimental lot higher losses have been observed at the end of the first, second, third and the middle of the fourth decade. The T1 experimental lot has registered the highest losses in the first decade while the T2 lot in the last decade. The losses registered for the T1 and T2 experimental lots during the spawn incubation were significant higher comparing to the control lot M as resulted by the statistical interpretation of data's.

Keywords: embryos survival, rainbow trout, triploids

Abstract

The body measurements was made on 20 males of river lobsters (Astacus fluviatilis or Astacus astacus). The lobsters on witch the study was made had an average total length of body of 12.72 cm ±0.19 cm (formed from: 6.07±0.10cm the length of cefalothorax, 4.73 ±0.10 cm the length of abdomen and 1.91 ±0.07 cm length of telson), and a body weight of 55.70±3.07 g. the males present a length of feelers of 8.53±0.34 cm, a antennas of 2.20±0.05 cm, and the stem of the eyes of 0.51±0.02 cm. The body of male present a average width of 3.35±0.07 cm at level of cefalothorax, and 2.40±0.05 cm at abdomen level. Average deepness of cefalothorax was 2.85±0.07cm, and abdomen deepness of 1.34±0.03cm. The 5 pairs of periopode had an average length of 10.91±0.42 cm, 6.06±0.22 cm, 7.21±0.21 cm, 6.57±0.16 cm and 5.85±0.15cm. The average length of pleopods was at first pear of 2.00±0.06 cm, at second pair of 2.11±0.05 cm, at third of 1.85±0.05 cm, at fourth of 1.73±0.04 cm and at fifth pair of 1.55±0.04 cm.

Keywords: river lobster (Astacus fluviatilis), somatic measurements, body measures

Abstract

The body measurements was made on 20 males of river lobster (Astacus fluviatilis or Astacus astacus). The lobsters on witch the study was made had an average total length of body of 12.72 cm ±0.19 cm (formed from: 6.07±0.10cm the length of cefalothorax, 4.73 ±0.10 cm the length of abdomen and 1.91 ±0.07 cm length of telson), and a body weight of 55.70±3.07 g. the males present a length of antennas of 8.53±0.34 cm, a feelers of 2.20±0.05 cm, and the stems of the eyes of 0.51±0.02 cm. The body of males present a average width of 3.35±0.07 cm at level of cefalothorax, and 2.40±0.05 cm at abdomen level. Average deepness of cefalothorax was 2.85±0.07cm, and abdomen deepness of 1.34±0.03cm. The 5 pairs of periopodes had an average length of 10.91±0.42 cm, 6.06±0.22 cm, 7.21±0.21 cm, 6.57±0.16 cm and 5.85±0.15cm. The average length of pleopods was at first pears of 2.00±0.06 cm, at second pair of 2.11±0.05 cm, at third of 1.85±0.05 cm, at fourth of 1.73±0.04 cm and at fifth pair of 1.55±0.04 cm.

Key words: river lobster (Astacus fluviatilis), somatic measurements, body measures

Daniel Cocan
Study Regarding the Conformation in Four Populations of Reproduction - Female - Rainbow Trout (Oncorhynchus Mykiss) From Trout Farm Fiad, County of Bistrita-Nasaud **13**

Abstract.

Rainbow trout (*Oncorhynchus mykiss*) is the main specie exploited in the salmon complexes. The reason is the plasticity and resistance to changes in environmental and disease factors, and due to fast growth rate obtained by the processes of selection and improvement that specie has undergone. In order to achieve the highest production and appropriate quality, a special role has the breeders and their performance. In addition to environmental conditions and nutrition, very important features which contribute to achieving valuable production, are: breeding age, physiological state and morphological indices. In this context, the authors propose to characterize the four populations of breeding females, taking into consideration the following factors: age, body mass index and the main morphological traits. It was followed by dynamic growth and development of breeding females aged three, four, six or eight years. The results obtained, on the reproductive performance of rainbow trout (*Oncorhynchus mykiss*), may help the formation of competitive breeding groups in the context of increasing economic efficiency of trout in Romania. The experiment was conducted in Fiad trout farm, Bistrita-Nasaud County, in June 2009.

Keywords: rainbow trout, breeding, physiology of reproduction, different ages

Daniel Cocan, Marius Zăhan, Vioara Mireşan, Radu Constantinescu, Camelia Răducu, Bianca Neghela, Ioan Sărmaş
Studies on Some Productive and Reproductive Performance in Female Rainbow Trout *(Oncorhynchus Mykiss)* and Brown Trout *(Salmo Trutta Fario)* at Four Years of Age, From Fiad-Telcişor Salmonids Complex, Bistriţa-Năsăud County **19**

Abstract

Consumer preferences regarding the various species of fish or aquatic organisms are highly variable. The criteria by which they orient are represented by: the price, organoleptic characteristics, healing and nutritional properties of meat. Today it is known that a high consumption of fish meat has a beneficial role in human health. Moreover, statistics indicates a high level of life expectancy in countries with tradition in terms of fish consumption, e.g. North-European and Asian countries. Statistics shows a high consumption of ocean fish and different species of salmonid family. The culture and intensive fish farming represents an alternative to the requirements of the fish market. The salmonids farmers focus their efforts to obtain high yields of high quality, in conditions of maximum economic efficiency. In Romania, the predominant specie encountered in salmonis farms is rainbow trout (*Oncorhynchus mykiss*). It is successfully reared because of its plasticity and resistance to changes in environmental conditions and disease, and efficient feed-conversion. For restocking mountain water with biological material, some trout farms operate successfully brown trout (*Salmo trutta fario*), a less effective specie for meat production, due to slow growth and development and low resistance to changing environmental factors. Profitability of fish production depends on the propagation processes, fish growth and developments, and supplying optimal environmental conditions for enhancement of the biological potential. The artificial reproduction of salmonids, involves several technological operations for achieving outstanding results on fisheries production. Of these operations, critical is the selection and improvement of breeding.

Keywords: Rainbow trout, brown trout, artificial propagation, selection, improvement.

Cristiana Diaconescu, Laura Urdeş, Ştefan Diaconescu, Marius Hangan
The Distribution of *Posthodiplostomum Cuticola* and *Rossicotrema Donicum* in *Scardinius Erythrophthalmus* and *Hypophtalmichthys Molitrix* Stemming from the Danube Delta **24**

Abstract

We investigated the pathogenicity of *Posthodiplostomum cuticola* and *Rossicotrema donicum* digenean infestations within freshwater fish populations, in the Gorgova – Uzlina, Dunavat – Dranov and Razim – Sinoie natural complexes. The so-called "Black spot disease" caused by the metacercarial infestation was diagnosed in 5 out of 11 studied freshwater fish species: rudd (*Scardinius erythrophthalmus*), silver carp (*Hypophtalmichthys molitrix*), zarte (*Vimba vimba*), bream (*Abramis brama*) and European perch (*Perca fluviatilis*). The metacercariae were found mostly on the surface of the body (on fins, scales and skin), but also in the mouth, gills, eye sockets and even within the muscle, underneath the skin. Additionally, prevalence of the disease was estimated in rudd and silver carp during a 6-year study period. It resulted a maximum prevalence of 33.44% in the silver carp caught in Dunavat – Dranov (during the 5th year of the study) and a minimum prevalence of 22.81% in the rudd caught in Gorgova – Uzlina

(during the 6th year of the study).
Keywords: Black spot disease, freswater fish, pathogenicity, prevalence estimation

Abstract

The pikeperch (*Sander lucioperca*) is one of the most valuable carnivorous fish species in Europe, and in Romania as well. In the literature there are no relevant data on growth dynamic and correlation among the main body measurements in pikeperch larvae obtained out-of-season and reared in recirculated aquaculture system (RAS). The aim of this study was to bring information for clarifying some of these aspects. Our results emphasized that correlation coefficient between maximum body high (H) and total length (TL) together with standard length (SL) decrease linear from 10 to 25 DPH. The correlation coefficients between the main length measurements (TL and SL) reveal a very high correlation between the two traits in pikeperch larvae. High correlations between body weight (BW) and the other length measurements were observed.
Keywords: correlations, growth, larvae, out-of-season, pikeperch, RAS.

Abstract

The aim of the study was to assess the spawning latency period in the hormonal induced reproduction of pikeperch. Spawners were injected with human chorionic gonadotropine - hCG (Pregnyl. Prior to the intraperitoneal injection, eggs were sampled to establish the maturation stage of oocytes. Females were stimulated with a single hormone dose of hcG (600 IU kg–1) and males were stimulated with a dose of 300 IU kg–1. There is a large variance in the spawning latency time of pikeperch.
Keywords: hormones, latency , pikeperch, spawning

Abstract

The studies was carried out in a sturgeon farm located in the south-west region of Romania. In the context of high density of the fish, the first clinical signs of the disease was the anorexia, followed by the appearance of bleeding on the fin, tail, gills and abdominal tegument. The ascitis was present but not common. The bacteriological exam emphasized the presence of Vibrio alginolyticum and Photobacterium spp. (formerly Pasteurella spp) with high sensibility at fluorfenicol. This is the first outbreak of vibriosis associated with pasteurelosis at sturgeon in the south-west region of Romania
Keywords: pasteurelosis, sturgeon, vibriosis.

Abstract

Fisheries have traditionally been managed by direct restrictions, including seasonal and area closures, minimum mesh size, and access limitations. In recent years, licensing and an individual quota system were introduced as effort-control measures, in order to bring fishing effort more in line with the available resources. The overall responsibility for fisheries policy in Romania falls under auspices of the Ministry of Agriculture, Forests and Rural Development through its Directorate of Fisheries. The major objectives of Romanian fisheries are to bring the national fisheries legislation closer to the European Union (EU) Common Fisheries Policy (CFP) and to set up the administrative capacity and institutional building needed to cope with EU accession in 2007. In June 2001, Romania completed negotiations with EU in the area of fisheries, accepting the entire *acquis communautaire* without requesting any derogation or transition periods. The European Fisheries Fund will support Romania as a new EU Member State to develop a competitive, modern and dynamic fisheries sector, based on sustainable fishing and aquaculture activities, while also taking account of other important aspects such as environmental protection, the demands of the consumers and the food industry. The program is also expected to increase the competitiveness of the fisheries sector, encourage job creation and promote the growth of the aquaculture industry.

The paper shows some aspects about Romanian fishery policy, an important opportunity for development research in fishery in fresh water from Banat region. Also, it is presents some research results about using the cereal feeding as fish's nutrition, in special for common carp.

Keywords: aquaculture, cereal feeding, common carp, fishery, fresh water, nutrition

Abstract

Clinical and paraclinical investigations (morpho-pathologic, bacterioscopic, bacteriologic and sensitiveness test to antibodies) done on 20 fish (rainbow trout), dead or in agony state, taken from a furunculosis pesthole in Salmonidae and proceeded from an intensive exploitation unit of trout, in Cluj county, put in evidence the following aspects :To clinical exam, in breeding basins, it appears individuals (5 %) which have presented locomotor troubles, listless and untidy swimming in water surface, lateral swimming anorexia, and on tegument it is observed diffuse hemorrhagic zones, lost of fish scale and necrosis of fins. It appears also secondary infections with fungi of Saprolegnia genus under the form of a white- dirty, downy film. From the 20 trut corpses were isolated 2 bacterial strains, from anterior kidney and from raclage in fin basis, with congestive lesions. Bacteria isolated are developing only after an incubation at 20 – 25^0 C and does not grow up to 37^0 C, and to microscopic exam directly from sauce, the mobility is absent Classic biochemical tests put in evidence the following positive biochemic properties: cataloze, oxidaze, indolal and the presence of hemolytic activity. Biochemical properties testing on API20E gallery also puts in evidence properties as : positive gelatinousis and sucraze fermentation. Based on bacterial strains development isolated only to 20 - 25 ^{0}C and the above mentioned biochemic properties, respectively the absence of pigment, bacterial strains isolated are appointed in Aeromonas genus, Aeromonas salmonicida species, achromogenes subspecies. By sensitiveness test in different medicine substances, using antibiogram technique, bacterial strains isolated from pesthole are sensitive in a decreasing order to: nalidixic acid, oxitetracycline, florfenicol and eurofloxacin and resistant to ampicyline, amoxiclav and colistin.

Keywords: furunculosis, inseminations, Oncorhynchus mykiss

Abstract

Investigations were done on 7 alive samples in agonic or death stage, taken from an extensive exploitation pond, in north-east Transylvanian zone, with an water surface of 0,2 ha and a total fish quantity of about 200 kg, second summer carp of an average weight of 300 g/individual. As a result of clinical, bacterioscopy and bacteriology and also necropsy laboratory exam it were put in evidence some aspects. So, clinical exam has revealed, by the presence of integument hemorrhagic ulcerous lesions, also the presence of some crustacaee ectoparasites, Argulus foliaceus species, which have made easier the disease spreading in whole effective. Necropsy exam puts in evidence, anatomy-clinic, the presence of integument hemorrhagic lesions under a point or diffuse form, but also ulcers and muscle – cutaneous necrosis. As a following of bacterioscopy exam of smears done from pathologic material taken in cutaneous lesions and colored by Gram method it was ascertained the presence of a bacterial polymorph flora, of bacillus and cocobacillus type, Gram negative. Bacteriologic exam (cultural), realized on ordinary culture mediums (sauce, water) and selective mediums (agar with blood) isolates in pure culture germs from Aeromonas kind, basis on morphological and cultural characters, which are framed in Aeromonas genus patterns described by speciality literature. As a following of biochemical characters exam, with the help of multitest API20E system it was established that Aeromonas spp. strains isolated, belong to hydrophila group 1 species, species which is responsible of bacterial hemorrhagic septicemia performing in carp. By testing the sensitiveness to antibodies and chemiotherapy in strains which have been found as diagnosis (diffusiometric method of antibiogram), it was ascertained that group 1 Aeromonas hydrophila strains, isolated from disease pesthole, were in decreasing order sensitive to : Eurofloxocin, Florfenicol (Floron) and Oxitetracycline and resistant to Ampiciline, Amoxicilin, Eritromicin.

Keywords: bacteriologic, Cyprinus Carpio, pesthole

Abstract

Analysis of turnover involves the causal relationships between different factors (quantity, quality and structure) and changes in economic and financial phenomenon. Such a study is required arguments for a set of management measures geared towards improving work farms analyzed. The evolution over time in turnover was based on known statistical models. The period considered in the study farm is 2007-2008, and turnover analysis refers to the business of delivering fresh and frozen fish. Following the study found that modification of fish production during the two years the level of the average price of delivery and, ultimately, turnover of the holding. Thus in 2007, fresh fish represented 56% of the total quantity of fish delivered, in 2008 the share of fresh fish delivered was only 45.5% of the total production of fish delivered. This change in structure has helped to increase overall turnover resulting from the fish market in the year 2008 consisted of turnover from the sales of fresh fish 43.7%, 56.3% difference is that of fish delivered frozen.

Keywords: fish farm, South-East Development Region, structure of production, turnover.

Abstract

Illegal, unreported and unregulated (IUU) fishing is a worldwide phenomenon. Its extent and its environmental, economic and social consequences are such that it has become a priority issue at international level. IUU fishing contributes to the depletion of fish stocks and jeopardises protection and recovery measures put in place to ensure the viability of resources. It represents unfair competition for those who exploit fish resources legally. The Commission have been involved in the fight against IUU fishing for over a decade and in 2002 the Commission adopted an Action Plan against IUU fishing inspired by the FAOs International Plan of Action to prevent, deter and eliminate IUU fishing of 2001. However, despite regional and international efforts to stop IUU fishing the phenomenon is still a growing problem and as a result, the European Community intensified its action towards IUU fishing by launching a consultation process in 2007. A Proposal to prevent, deter and eliminate IUU fishing was adopted in October 2007 and a Regulation to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing was adopted on 29 September 2008, after a unanimous political agreement.

Keywords: fishery, implementation, law, legal, Regulation

Abstract

The international community have been of aware of IUU fishing for over a decade. As a result, the FAO adopted an International Plan of Action in 2001 which called upon all its members to take actions against these illegal practices. The EC adopted a Regulation to prevent, deter and eliminate IUU fishing on 29 September 2008. It will enter into force on 1 January 2010 and is inspired by the FAOs International Plan of Action to prevent, deter and eliminate IUU fishing (2001). The Proposal for a Regulation to fight IUU fishing was a result from a public consultation held in January 2007. It constitutes one of the most serious threats to the sustainable exploitation of living aquatic resources and marine biodiversity, causes depletion of fish stocks and future stock growth, damages the marine environment by over fishing and irresponsible fishing practices and techniques. The depletion of fish stocks reduces the size of catches which in turn contributes to lower turnover and eventually job losses. It contributes to unfair competition among those operators who abide by the rules and those who do not and it causes serious overall consequences for coastal communities and in particular those in developing countries who rely to a large extent on fisheries

Keywords: adoption, consequences, consultation, public, Regulation, stock

Abstract

The undergoing of two experiments of breeding *Acipenser baeri* seedlings, in two intensive systems of sturgeon growing, placed in different locations, led to the establishment of sturgeons' growing rates and of their survival percentages. During the 60 experimental days, the experimental lot of Black Sea sturgeon bred at Timisoara Station has reached a real breeding increase of 17,102 g, and for the samples from Brates Station a real breeding increase of 20,884 g, and the average coefficient of artificial food conversion is 1,3 g/g breeding increase.

Keywords: sturgeons, breeding, feeding, growing rates, intensive systems, technological indicators

Abstract

The objective of this study was to investigate the ability of some larvae of cestodes and nematodes which live in freshwater fish (intermediate hosts), to exhibit an uptake of heavy metals.

According to some scientifical papers treating this subject, only adult worms were able to absorb successfully heavy metals within their hosts. Furthermore, it is believed that only the adults would act as biofilters and consequently as trustworthy indicators of environmental pollution.

This study, carried out on the Danube Delta area, comes to prove the ability of the larvae to absorb heavy metals within their hosts, even when the pollution level with respect to heavy metals is very low.

Following the biochemical analyses of water, sediment, aquatic plants, larvae and fish tissues (liver and muscle) samples, it resulted that the larvae were able to absorb important quantities within their hosts, so that only scarce amounts to be found in the muscle and liver. Both parasites were able to accumulate some heavy metals within their hosts, although only one of them did it successfully.

Keywords: Parasitic larvae, fish, biofilter for aquatic pollution, heavy metals

Abstract

In the study we aimed at estimating prevalence of two Myxosporidian diseases (Henneguyosis and Myxoboliosis), in order to measure their frequencies and distributions within populations of *Esox lucius*, *Sander lucioperca* (Henneguyosis) and *Perca fluviatilis* (Myxoboliosis) originating from Sontea-Fortuna (S.F.) and Gorgova-Uzlina (G.U.) aquatic habitats, within the Biosphere Reservation of Danubian Delta, Romania.

The biologic material was selected without prior knowledge of the disease status. Prevalence was determined by classifying fishes as either diseased/infected or not, at one moment in time (Point prevalence). The prevalence was determined as the proportion of diseased/infected individuals within the studied fish species.

The research started in 2003 and finished in 2008. In *Esox lucius* maximum prevalences were found during the years 2005 (10.26% in S.F. aquatic habitats) and 2008 (11.43% in G.U. aquatic habitats); in *Sander lucioperca* maximum prevalences were found during the years 2004 (15.91% in G.U aquatic habitats) and 2006 (16.67% in S.F. aquatic habitats); in *Perca fluviatilis* maximum prevalences were found during the years 2003 (8.97% in S.F. aquatic habitats) and 2004 (15.93% in G.U. aquatic habitats).

Overall, during the research period, an over-dispersed distribution of the parasites was noticed within both aquatic habitats.

Keywords: freswater fish, *Henneguya psorospermica*, *Myxobolus* sp., prevalence

ECOLOGY, ETOLOGY AND WELLFARE

Abstract

Knowing the behaviour of one species, with interest in animal husbandry science represent a compulsory necessity for the development and improvement of the breeding and exploiting technology for this species. The studies on coypus behaviour are applied in the development of knowledge regarding ethology, coypu breeding technology, animal welfare and, at the moment, this present great importance for animal protection. The biological material studied was consisted of adult coypus, belonging to the variety Golden Standard. The supervised indices were: feeding behaviour duration if coypus are fed with maize grain and fodder beet according to gender and time slot, the duration of one feeding sequence according to forage consumed, gender and time slot and the number of feeding sequences according to forage consumed, gender and time slot. For realising the purposed aim, each coypu was monitorized (video), individually, 24 hours a day. The duration of feeding behaviour when coypus are fed with maize grain and fodder beet was 4921.63±472.64 seconds for males (5.69% of the behaviour al manifestations), and for coypu females, the duration of feeding behaviour was 5450.00±297.94 seconds (6.30% of the behaviour al manifestations). The most intense manifestations of the feeding behaviour occurred in the time slot 08:00-14:00, and the lowest intensity of the feeding behaviour manifestations occurred in the time slot 02:00-08:00. The average total number of males feeding sequences if coypus are fed with maize grain and fodder beet was 51.63 ± 5.54 sequences and the average total number of females feeding sequences was 56.38 ± 2.48 sequences.

Keywords: coypu, feeding behaviour, intensive system.

Abstract

The studies on coypu behaviour are applied in the development of knowledge regarding ethology, in the coypu-breeding technology, animal welfare and, at the moment, they present great importance for animal protection. The biological material studied was consisted of health adult coypus, belonging to the variety Golden Standard with a similar body mass. The indices supervised were: feeding behaviour duration if coypus are fed with barley and carrots according to gender and time slot, the duration of one feeding sequence according to forage consumed and gender and the number of feeding sequences according to forage consumed and gender. For realising the purposed aim, each coypu was monitorized (video), individually, 24 hours a day. The duration of feeding behaviour when coypus are fed with barley and carrots was 4507.88±38.99 seconds for males (5.21% of the behavioural manifestations), and for coypu females, the duration of feeding behaviour was 4576.63±26.01 seconds (5.29% of the behavioural manifestations). The most intense manifestations of the feeding behaviour took place in the time slots 08:00-14:00 and 14:00-20:00, and the lowest intensity of the feeding behaviour manifestations took place in the time slot 02:00-08:00.

Keywords: coypu, feeding behaviour, intensive system.

Abstract

In sewage sludge from urban wastewater treatment stations can often be find high levels of Ni, Pb, Cu, Zn, Mn and Cd. Aerobic or anaerobic composting of this sewage sludge does not eliminate the possibility of bioaccumulation of these metals in plants through metabolic processes of phytoextraction type. Researches regarding the accumulation degree of heavy metals through phytoextraction processes were performed on soybean plants (Glycine max), Condor variety. Plants were fertilized with anaerobic composted sludge in amounts of 25 t of / ha, 50 t / ha and 100 t / ha. The chemical analysis was done on an average sample of three repetitions. Metal concentration in soybeans was analyzed by reporting to the maximum allowance level for sheep, considered one of the most sensitive farm species to heavy metal toxicity. Our results showed a higher level than normal with 5.8 mg / kg only in the case of copper ions. Zn, Pb, Mn and Cd concentration in soybeans was below the maximum allowance limits set by the rules of feeding farm animals. Also, heavy metal content of soybeans was not affected by the amount of composted sludge used as fertilizer.

Keywords: anaerobic composted sludge, bioaccumulation, heavy metals, soybean

Abstract

The compost tested in this study resulted from the anaerobic fermentation process of sewage sludge with cereal straw. Processing and post-treatment were made by Biotechnological Research Centre within INCD ECOIND from Bucharest. Experimental program included testing the effect of fertilizer in quantities of 25 t, 50 t and 100 t compost / ha on the production of soya beans. It was also investigated the influence of the combination of fertilization with compost and inorganic fertilization with levels of 200 kg, respectively, 400 kg NPK / ha. Was analyzed the following productivity indicators: plant density, number of floors of pods, number and weight of pods and total beans production, in full ripening stage. In the case of fertilization only with composted sludge, production of peas and beans was higher in variants with 50 t / ha and 100 t / ha (2095 kg and 1990 kg grain / ha). Therefore, doubling the amount of compost does not provide corresponding increase yields of soybeans. Combining organic and inorganic fertilization determine a proportional production increase only for the total biomass production. The tested compost is a good organic fertilizer and the amount that provides the greatest soybeans production is 50 t / ha.

Keywords: compost, fertilization, production, sewage sludge, soybean

Abstract

Fly ash dumps are an environment difficult to vegetable because of the high content of inert materials (metal oxides in excess of 95-99%) and it does not contain any nutrients based on N and P. Carbon compounds resulting from incomplete combustion lignite are and not easily assimilated by plants. Fly ash properties do not allow water retention in the upper layer. The addition of fertilizers as biosolids (municipal sludge) and a material in type of indigenous volcanic tuff, with capacity of water retention and gradual release based on plants necessities, allowing both plant growth and protection against excessive accumulation of toxic metals in air tissues. A field experiment was conducted on a lignite fly ash dump, on two types of experimental parcels, control parcels and experimental parcels (fertilized with biosolids and treated with volcanic tuff). In this study, through work technique, were obtained in case of plots fertilized with biosolids and treated with tuff volcanic indigenous, reduction of metal accumulation in aerial tissues of the examined species of: 73-94% for Pb, 37-50 % for Cr, 28-43% for Ni and 12,5-22% in comparison with control plots.

Keywords: accumulation decrease, heavy metals, fly ash dumps, herbaceous plants

Abstract

In the platform of applied research of Ecology and the Environment protection discipline from the Animal Science and Biotechnologies Faculty Timisoara was investigated during 3 years the remanent effect of compost made from sewage sludge used as organic fertilizer on forage plants. The experiment was done in vegetation pots, the experimental block being organized on 15 variants in 3 repetitions. Was used a forage plants mixture in equal parts of *Lolium perenne* and *Trifolium repens*, being studied the germination, growth and development of plants. In this paper are presented the results from the second year of study, the green mass productions at three harvestings. The obtained results show a good production of green mass in the second year, the productions being directly proportional to the amount of compost administered in the first year as fertilizer. Compared to the first year, was obtained a higher amount of green mass production in the case of fertilization with quantities higher than 100 t compost / ha.

Keywords: compost, forage plants, remanent fertilizer effect, sewage sludge

Abstract

The larvae of blowflies from the *Calliphoridae* family cause fly strikes in sheep and other species of economic importance. Impaired wool, decrease of ewe fertility, and even death can occur in heavy infestations. This paper describes the *Calliphora spp*. blowflies' behavior on and around a trap baited with liver and ammonia before they entered in. More than half of *Calliphora spp*. blowflies (50.88%) stayed a medium time (eight to fourteen seconds) on the standard trap, while only 1.79% of them spent a longer time (26 to 30 seconds) before entering the trap.

Keywords: behavior, *Calliphora spp*., traps.

Abstract

Traumatic myiasis is a serious threat for worldwide sheep flocks. It is known that the blowflies' abundance and occurrence of strikes could be diminished by traps use. The aim of this study was to ascertain the role of olfaction in blowflies' orientation towards the odorous traps. Three genera of blowflies: *Calliphora, Lucilia* and *Protophormia* were monitored. For the 50 m distance all three genera had a positive response to detect the odorous bait, while for the 100 m distance its perception was decreased, but the structure in re-trapped blowflies remained the same, better for *Calliphora* (18%) and diminished for *Protophormia* (2%). For the 200 m distance only blowflies of *Calliphora* (10%) and *Lucilia* (2%) genera were recovered, respectively.

Keywords: blowflies, olfactory cue, recover.

Abstract

The research was made for evidenced the animal exploitation activities with negative potential for environment. For this reason were located the following work point: on the Ialomiţa river course, Călăraşi county – dairy cow farm; upstream of the farm a group of cows households. At the level of the each work point were taken fresh and fermented manure samples (before field application), liquid manure samples (the sample was taken in the field application moment), water and sediment samples. The water and sediment samples were taken among a latitudinal degree, in flow river sense, for each season (March and September-October).

Keywords: environment, dairy farm, household, manure, sediment, water

Abstract

The aim of this paper was to assess the microbiologic quality of air in broiler houses. The number of bacteria (mesophile, staphylococci, streptococci and gram-negatives) and fungi was determined in 6 broiler houses with chicken of different ages (1-6 weeks old) through specific methods. The results were statistically processed by using the SPSS software, version 17. The number of bacteria and fungi varied in the 6 broiler houses, ranging from 2.25 x 10^5 to 2.17 x 10^6 for the total number of mesophilic bacteria, between 3.5 x 10^4 – 1.27 x 10^6 for staphylococci, 7.4 x 10^4 – 5.01 x 10^5 for streptococci, 3.5 x 10^3 – 1.53 x 10^4 for gram-negatives and from 1.67 x 10^4 to 8.13 x 10^4 for fungi, respectively. The number of bacteria and fungi were significantly lower for the younger chicken ($p < 0.05$). The proportions of groups with hygienic significance within the total mesophilic bacteria number were: 15.7% - 68.6% staphylococci, 6.7% - 45.6% streptococci and 0.2% - 4.5% gram-negatives. The comparative appraisal of the microbiologic quality in the broiler houses showed better air quality in the youngest chicken's house (one week of age). The obtained results indicate the necessity for increased ventilation and for air disinfection during the chicken's fattening period.

Keywords: airborne bacteria, airborne fungi, gram negative, mesophilic bacteria, poultry age.

Abstract

The aim of this paper was to assess the quality of water consumed by animals in rural households and farms. The water quality was determined based on indicator parameters (pH, ammonia, sulphates, iron, chlorides, organic substances, overall hardness, total number of germs, number of Coliform bacteria) and chemical parameters (nitrites, nitrates), by collecting and analyzing 40 water samples (from 20 households and 20 farms). The results were compared to the provisions of the Laws 458/2002 and 311/2004. Three water samples (15%) from rural households had nitrates exceeding the threshold levels. Within the indicator parameters, the following ones showed alterations: ammonia (20% from samples), sulphates (40% from samples), chlorides (35% from samples), overall hardness (60% from samples), organic substances (20% from samples), total number of germs (all of the samples) and the number of Coliform bacteria (90% from samples), respectively. The water used in farms had no alterations of the chemical parameters. Within the indicator parameters, the following showed divergences from the legal provisions: overall hardness (85%), the total number of germs (50% from samples) and the number of Coliform bacteria (35% from samples). The obtained results indicate a better quality of water consumed by animals in farms in comparison with water consumed by them in rural households.

Keywords: ammonia, coliforms. drinking water, nitrate, water quality.

Abstract

During two years, was studied the phytoextraction potential of some perennial species (Medicago sativa and Trifolium pretense, Festuca arundinacea and Lolium perenne), for Zn, Cd, and Pb from soils polluted with waste mining. The experiment was done on kernozem soil with adding of 20 kg waste mining/m^2 and 8 kg biosolid/m^2. The results showed that in all experiments, rye-grass is a good extractor for Zn and Cd, and leguminous species for Pb. Both leguminous species, especially M. sativa, presented a high tolerance for lead toxicity, even with 3-4 times greater values than maximum allowable level from actual legislation. In all cases, regardless of the experimental variant, raygrass (Lolium perenne) is a good accumulator of Zn and Cd, and red clover (Trifolium pratense) of Pb. The values of metal bioaccumulation increase gradually with their concentration in soil. Quality of very good extractor of Pb displayed by Trifolium pratense species are kept even in case of excessive pollution with Pb, when it exceed 3.4 times the maximum permissible norms. This proves, as Medicago sativa species, a good tolerance and resistance to toxicity of this metal. In case of addition of natural zeolite-volcanic tuff there was no increase in the rate of Zn bioaccumulation. Only in case of Cd at Lolium perenne and Pb at Trifolium pratense appear the favourable effect of metallic ions bioavailability in soil for plants.

Keywords: heavy metals, leguminous and gramineous species, phytoextraction, zinc

Abstract

Most Romanian power plants were built in a period when environmental impact of their operation was undervalued, and constraints related to environmental protection were relatively few. Location of power plants and fly ash dumps was chosen most often by arbitrary criteria, and never after the impact that it may have on the environment. Building fly ash dumps have an effect of destruction of soils not only on the surface equivalent to those of dumps but also of the contiguous lands. Old fly ash dumps are a major risk because of the dispersion of pollutants in water and soil by percolation and soil leaching, and because of the unwanted invasion of weeds that are adaptable to arid conditions of the dumps and then invade surrounding areas jeopardizing the surrounding crops. In attempting to install vegetation an old fly ash dumps, the area were invaded by two species of weeds that quickly overgrown the experimental parcel and the surroundings. The present study followed the invasion degree of fly ash dumps with weeds and aspects regarding their development and breeding in the new formed ecosystem.

Keywords: fly ash dump, biosolids, invasive weeds

GRASSLAND AND FODDER CROPS

Abstract

The distance between rows and the amount of seeds used for planting exert a decisive influence on the fructification degree in perennial gramineae. To determine the influence of these factors on seed yield, we used four planting norms (5, 10, 15, 20 kg/ha) and three distances between rows (12.5, 25 and 50 cm).

Keywords: distance between rows, *Festuca rubra*, planting norms, seed yield

Abstract

One of the most efficient measures that contributes to forage improvement is represented by the temporary pastures consisted of legumes and perennial gramineae. Beside Agrostis tenuis, Festuca rubra is the forage gramineae with the largest spread and dominance in our country. That is why its introduction in various associations with forage legumes leads to qualitative and quantitative improvement of the yields obtained on temporary pastures.

Keywords: *Festuca rubra , Lotus corniculatus*, nitrogen-based fertilization, *Trifolium repens*

Abstract

This work presents the influence of climatic resources (rainfall and temperature) on the efficiency of permanent pastures located at different altitudes. The utilization degree of these climatic gradients was expressed successive to the determination of the following indices: the unitary efficiency of dry matter (Rup) and specific intake of rainfall water (Csa) and the unitary efficiency of dry matter (Ruc) and specific heat intake. The quantitative assessment of these productivity indices proves the influence exerted by altitude on permanent pastures' efficiency.

Keywords: altitudes, permanent pastures, specific intake, unitary efficiency

Abstract

This work presents the potential and real seed producing capacity in some Romanian varieties of legumes and perennial gramineae: *Trifolium repens, Lotus corniculatus, Lolium perenne, Festuca pratensis, Festuca arundinacea* and *Dactylis glomerata.* To calculate the potential production, we performed determinations and analyses on each variety, regarding floral apparatus' morphological and anatomic structure (number of inflorescences, number of flowers, number of ovules/ovary), and the real production was determined „in situ".

Keywords: gramineae, legumes, potential and real seed production, varieties

Abstract

This work presents the influence exerted by the bacterial inoculation of legumes and nitrogen-based fertilization of temporary pastures on the rate of atmospheric nitrogen fixation (BFN). The researches were carried out in an experimental display consisted of a bifactorial experience (A = bacterial inoculation; B = nitrogen doses), during a three-year period, by planting an association of *Dactylis glomerata (60%) + Medicago sativa (40%)*. The estimated amount of BFN was determined with the method of nitrogen balance with a reference crop. The results achieved showed that, by inoculating the legume within the temporary pasture association, we may obtain an increase of the BFN rate from 2.66 kg/1% alfalfa to 3.24 kg/1% alfalfa, respectively an estimated amount of 0.65 kg N_{fixed}/day/ha, in the inoculated variant.

Keywords: amount of fixed nitrogen remained in soil, mean fixation rate, nitrogen fixation, pasture of *Medicago sativa + Dactylis glomerata*

Abstract

Egyptian clover (*Trifolium alexandrinum L.*) represents an annual legume species with importance in animal nutrition. Researches proved the possibility of introducing this species in the floristic structure of the temporary pastures planted in spring, in order to increase dry matter and to make crops efficient from the first year of vegetation. The results achieved showed that in the variant planted with 22 kg/ha alfalfa + 4 kg/ha orchard grass + 6 kg/ha Egyptian clover, the forage yield increased with 20% compared with the same variant without Egyptian clover..

Keywords: dry matter, Egyptian clover, temporary pasture,

Abstract

The carrying out of uniform forage crops represents an important technological loop for all agricultural species. The uniformity of these crops is caused especially by seed germination capacity, respectively by plant emergence capacity, depending upon the climatic and technological conditions. With regards to the researches carried out in this direction. We present here the influence exerted by some biologically-active products, used through extra-root application during plant vegetation period, upon seeds submitted to germination. The observations performed on alfalfa seeds have led to the conclusion that the per cent of germinated seeds ranges from 95.66%. In the untreated control variant, to 99.33% in the variant treated with the product Stimupro and Mega grow.

Keywords: biostimulants, germination, alfalfa

Abstract

The carrying out of uniform forage crops represents an important technological loop for all agricultural species. The uniformity of these crops is caused especially by seed germination capacity, respectively by plant emergence capacity, depending upon the climatic and technological conditions. With regards to the researches carried out in this direction, we present here the influence exerted by some biostimulators, used through extra-root application during plant vegetation period, upon seeds submitted to germination. Concerning the red clover seeds, we may notice an increase of the germination energy from 88.33% in the untreated control variant to 95.67% in the variants submitted to treatments with biostimulant substances.

Keywords: biostimulants, germination, red clover

Abstract

This work studies the yielding and grazing capacity of some permanent pastures located in Banat's Mountains, at 236 – 1300 m altitude. The mean results achieved showed that the yield difference between the minimal altitude level (236 m) and the maximal one (1300 m) is 0.93 t/ha DM. This difference leads to the conclusion that the yield of the permanent pastures located in the studied area decreases with 0.87 kg/ha DM (about 0.5 t/ha fresh mass) for each 100 m of altitude.

Keywords: altitude, grazing capacity, yield

Abstract

One of the main concerns in the Cindrel Basin is represented by the attempts to increase the value of the mountainous pastures with the help of the Turcana breed of sheep. The area known as *Marginimea Sibiului* (the villages which surround the city of Sibiu) has developed on the slopes of the Cindrel Mountains and it has become a pastoral area of national interest.

The concerns of the "Institute of Research-Development for Montanology Cristian – Sibiu" (ICDM Cristian-Sibiu) regarding the improvement of these pastures in time aim at: enhancing the green mass yield, ameliorating the floristic composition and encouraging the conversion of quality animal products.

The results of the research are interesting both from a theoretical and especially from a practical point of view, as farmers and their associations can adopt them in order to increase their income and to obtain original brands for their products, which could become competitive both in the domestic and foreign markets.

Keywords: animal products.,improving the pastures, pastoral area.

TECHNOLOGIES APPLIED IN ANIMAL HUSBANDRY

APICULTURE

Abstract

It is well known that breeding is based on phenotypic and behavioural performance assessed at the level of each honeybee colony. By selection, the genes responsible for the desired characters have to be favoured, by evaluation and classification of all colonies involved in a breeding program. Generally, in the beekeeping practice, the most applied method of selection is the mass selection regarding the main objective- honey production. Some more elaborated programs use selection simultaneous selection on several characters. Until now, a standard method for honey bees evaluation and selection on several characters could not be generalized, every breeder establishing the selection method depending on proposed goals which could be different especially when we speak about different races and environmental conditions. Taking into account the selection objectives in Romania it was conceived a standardized methodology for the selection on several characters in Romanian condition

Keywords: breeding programs, traits, honeybee, selection, standardization

Abstract

Taking into account the fact that quality and biological value of bee products depend on the chemical composition and taking account of the environmental situation, studying the content and dynamics of micro-, macro elements composition of soil, plant, bee products and bee body have theoretical and practical interest. Our research was conducted to determine the micro-and macro elements content in soil composition, nectar-pollen plant leaves, pollen, bee bread and body. Content of micro- and macro elements were determined by atomic spectroscopy method in the laboratory of the Institute of Atomic Spectroscopy Chemistry of the ASM. It was established that the soil composition is containing 5434,69 mg/kg micronutrients in nectar-pollen plant leaves - 319,3 mg/kg, pollen - 179,04 mg/kg, pasture - 152,7 mg/kg, honey - 5,01 mg/kg and the bee body - 103,76 mg/kg. It was revealed that the total quantity of studied macro elements in soil was 6230,1 mg/kg, nectar-pollen plant leaves - 54409,9 mg/kg, pollen - 13772,74 mg/kg, pasture - 9311,2 mg/kg in bee body - 24234,2 mg/kg.

Keywords: bee, honey, micro-, microelements, pollen.

Abstract

It has made a study concerning the biological development of hybrid bee's families (Italian x Carpathian) comparative with Carpathian bee's families. The bees were housed in multi-storey hives. The following parameters were studied: the queen bee prolificacy, the flight intensity during harvesting, the flight intensity during bad weather the irascibility, the behaviour of the bees during the survey and the predisposition to swarming. At the hybrid families, queen bee prolificacy and the rate of old bee's replacement were significantly higher ($p \leq 0.01$). In terms of the flight intensity during bad weather and the swarming instinct, were not found significant differences ($p \geq 0.05$).

Keywords: biological evolution, hybrid bees

Abstract

This work presents the results of the morphological measurements performed on working bees originating in 6 apiaries located in Caras-Severin and Timis Counties. The experiments were carried out during 15.08.2009-15.09.2009, on 412 bees belonging to the species Apis mellifica carpatica. During the experiment, we performed the following determinations: proboscis length, anterior wing length and width, posterior wing length and width, tibia length, tarsus length and we calculated the tarsal, cubital and radial indices. Successive to the statistical interpretation, we observed that the bees originating in the apiaries from Caras-Severin recorded bigger values in most parameters studied.

Keywords: morphological characterization, bee populations, Banat ecotype.

Abstract

In this work, we tested the resistance of bee families to young bee diseases. The researches were carried out in two apiaries from Timişoara and Comoraste, Caras-Severin County. The biological material was consisted of 10 bee families belonging to the species Apis mellifica carpatica, distributed in two experimental variants of 5 families, with almost equal power. During this experiment, we assessed the degree of cleaning and removing of the young bees that died of freezing. Successive to the researches performed, in all the three controls we observed significant differences, from a statistical viewpoint ($p<0.05$) between the two experimental variants, regarding the number of cells with removed dead young bees.

Keywords: testing, bee family resistance, bee brood diseases.

CATTLE PRODUCTIONS

Abstract

Aim of this research was to describe some aspects regarding the position adopted by lactating dairy cows during rumination process. Researches were carried out on 20 multiparous Romanian Black and White cows, housed in total confinement in a tied stanchion barn. Cows were in their first 100 days of lactation. During current study the rumination position adopted by cows (lying or standing) and time spent ruminating was registered (by means of total duration, time length of a rumination period and number of ruminating periods) per 24 h and on day segments. Position adopted by cows while ruminating was compared between summer and winter seasons, using video material recorded using a professional system CC9622BIR with four channels and a capacity of 125 frames per second. During winter season, cows spent ruminating per 24 h on average 186.35 minutes (3.10 hours) in standing position and 324.05 (5.40 hours) minutes while lying. In the summer season, cows adopted standing position during the rumination process on average 225.35 minutes (3.75 hours) and 176.45 (2.94 hours) minutes while lying down. Season had little influence on the standing position during rumination (39 minutes, $p>0.05$), but influenced significantly the lying down time during rumination (147.60 minutes, $p<0.001$).

Keywords: cattle behavior, dairy cows, Romanian Black and White, rumination process

Abstract

The aim of this paper was to measure the main aspects that characterize the resting behavior of six months old calves during the winter season. During the experiments the following resting behavior aspects were determined: number of resting periods, the length of resting periods. Results showed that in the winter season the total length of laying down periods was 150.6 minutes in the morning, 171.0 minutes in the afternoon and 358.3 minutes during the night. In the winter season calves stood down in 3.2 periods during the morning, 3.0 periods during the afternoon and 3.1 periods during the night. There were very significant differences between morning and afternoon ($p<0.001$), between morning and night ($p<0.001$) and between afternoon and night ($p<0.001$) for total time spent lying down by calves. In the winter season the total time spent resting (sleep and rest laying down) was 46.4 minutes in the morning, 36.3 minutes in the afternoon and 132.7 minutes during the night. The differences between morning and afternoon were not significant ($p>0.01$), but the differences between morning and night ($p<0.001$) and between afternoon and night ($p<0.001$) were very significant for total time spent resting by calves.

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

Abstract

Research follow to assess levels of productivity and the main indicators of milk of Romanian Simmental cows and its half blood, exploited in terms of milk production into Alba County environmental conditions. There were studied 45 cows from "P.F.A. Munteanu Cornel" farm. The results show that the maximum average of milk production is 5774 kg, registered in the third lactation and the average percentage of fat and protein is 3.92 respectively 3.34. The conclusion learned from the study is that Romanian Simmental cows studied have quantitative and qualitative productions over race standard and it is trying to reduce the period of exploitation and to intensify the process of milk production in first lactations.

Keywords: lactation, milk quality, Romanian Simmental

Abstract

Aim of the present study was to establish influence that lactation order has on the number of somatic cells from raw milk in Romanian Black and White breed cows. The study was carried out on 125 lactations of 92 cows. Data were statistically processed using Microsoft Statistica program, and by variance analysis Anova/Manova. Results obtained shown that primiparous cows had a somatic index smaller (5.29), for this index corresponds a lower number of somatic cell/ml of 195000. In multiparous cows, during the fourth lactation, the greatest somatic index was registered (5.81), value that corresponds with a concentration of somatic cells in milk/ml of 646000.

Keywords: cow milk, lactation order, Romanian Black and White breed, somatic cell count

Abstract

Researches were carried out on 988 normal lactations of Romanian Black and White cows from the actual active population raised in Timiş County. Six groups of production were formed according to the lactation order: 1st, 2nd, 3rd, 4th, 5th, and 6th and over. For each group, the averages and dispersion indices were calculated, and the differences between groups were statistically tested. The highest production was obtained by cows in the 6+ lactation, 4979.2 kg milk with 3.921% fat and 3.26% protein, and the lowest in the first lactation 4455.4 kg milk with 3.944% butterfat and 3.195% protein. Milk production in the first lactation was significantly lower ($p<0.05$) than that produced by cows in the second, fifth and sixth lactations, by 495.9 kg milk and 16.98 kg protein; 477.9 kg milk and 17 kg protein; and 523.8 kg milk and 19.97 kg protein, respectively. Also, cows in the second lactation produced more

($p<0.05$) by 353.8 kg milk and 10.61 kg butterfat than cows in the third lactation.

Keywords: cows, lactation, milk, Romanian Black and White, Timiş

Abstract

The aim this work was to estimate the genetics improvement in selected herds of the Slovak spotted breed. The genetics gain for fat and proteins production in kg was calculated by different methods. Genetics gain was between 3.91 - 5.79 kg for fat production and 3.35 - 4.71 kg for proteins production. Increase of inbreeding was estimated to be 0.867 - 1.098 - 1.987 % behind generation. Prediction genetic gain by "Truncation" selection was 0.327 to 1.038 kg for fat, 0.710 to 1.127 kg for proteins in fathers of daughter and 0.476 to 1.184 kg for fat, 1.007 to 1.452 kg for proteins in mothers of daughter.

Key words: cows, genetic improvement, Slovak spotted breed, fat, proteins.

Abstract

Research was carried out on a number of 30 Sură de Stepă cows raised in semi-intensive stalling at S.C.D.C.B. - Dancu, Iasi. On this nucleus we studied the main lacto-proteins systems and the correlations with milk production indicators. At Sură de Stepă breed were identified alleles for the six loci codifying the six types of major milk proteins (α S1-cz; β-cz; K-cz; β-lg; α-la; α S2-cz)**.** In the system αS1-cz allele α_{s1}-Cn B has the greatest frequency (0.700), in the system β-cz allele β-Cn A_2 (0.550), in the system K-cz allele k-CnA_2 (0.583) and heterozygous genotype AB (0.416) respectively BB (0.375), in the system β-lg allele β-lgA_1 has the greatest frequency (0.542) and heterozygous genotype AB (0.500), in the system α-la could be found a mono-morphism for allele α-la B and similar in the system αS2-cz for allele α_{s2}-Cn A. Kappa–casein (K-cz) is positive and strongly correlated with fat % respectively protein % (r_p = 0.58-0.77, r_g = 0.67-0.83, r_m = 0.64-0.87).

Keywords: breed, correlations, lacto-proteins, milk, indicators, Sură de Stepă

Abstract

The aim of the paper was to investigate the influence some factors on the consumers' opinion regarding the animal welfare labelling of animal products. The analysed question was: "When purchasing eggs, meat or milk can you easily identify from the label those products sourced from animal welfare friendly production systems?" Respondents chosen only one answer out of the five offered: yes, most of the time; yes, some of the time; no, very rarely; no, never; and don't know. Thirty three percent of females considered they could find sometime information regarding the animal welfare on the labels, while males considered that this information could be found very rarely. Up to 55 years of age, 50% of the consumers consider that the labels do not contain the information about animal welfare, while after this age most of consumers consider they found this information on the labels. Over 50% of Orthodox and Roman Catholic responders considered that the information on animal welfare on the labels was found some of the time or very rarely. Respondents, irrespective of their living area or monthly income, considered that there is scarce information regarding animal welfare on the labels. Internet access significantly influenced the consumers regarding the availability of the information on the labels.

Keywords: animal products, animal welfare, labels, Romanian consumers

Abstract

The aim of the study was to assess the new body measurements introduced in use for Romanian Black and White cows belonging to Holstein-Friesian breeds, and their influences on body indices. Researches were carried out on 66 adult Romanian Black and White cows. The following measurements were performed: 1) old: height at withers, oblique body length, and chest depth, and 2) new: height at rump, body length, and body depth. The following indices were calculated: lateral body index, lateral trunk index, and thorax depth index using both old and new measurements. Variability for the body dimensions and indices, both old and new, was low, as well as differences between averages and median. New body dimensions, measured in different points of the cows, differ significantly from the old used dimensions in describing the conformation of the Romanian Black and White cows. Therefore the body indices made up with the new measurements were significantly different compared to the old indices. However, there were high and significant correlations between the old and new body dimensions and indices, showing that there are similar factors that influence them. Further research should be carried out in order to clarify the functional and conformation meaning of the new dimensions and indices.

Keywords: body indices, body measurements, cows, Romanian Black and White.

Abstract

The study was carried out on 9 Romanian Black and White cows in their first one hundred days of lactation. The aim of this study was to measure the main aspects that characterized the excretion behaviour (urination) of the cows in 24 hours that were divided into 3 day periods: 07:00-14:00, 14:00-2:001, 21:00-07:00. During the experiments, the following urination behaviour aspects were determined: total number of urination, number of urination in the three intervals, number of urination according to administration order of forages (fibrous-succulents and succulents-fibrous) .Data was computed by ANOVA/MANOVA. Results showed that the all the differences between intervals were statistically non-significant ($p< 0.05$). In succulent-fibrous order the urination were 0.66 higher than in fibrous-succulent order ($p< 0.01$). Total number of urination resulted by summing the urination from the three intervals, was 14.11 in the first administration order (fibrous-succulent) and 16.06 in the second administration order (succulent-fibrous).

Keywords: behaviour, cows, Romanian Black and White, urination.

Abstract

Investigation carried out in this study focused on the urinating frequency and factors that has an influence on them, in 9 Romanian Black and White primiparous cows, during the first hundred days of lactation, in tied stalls. The aim of this study was to measure the urinating frequency of the cows in 24 hours that were divided into 3 day periods: 07:00-14:00, 14:00-21, 21:00-07:00, according to administration order of the fodder (fibrous-succulents and succulents-fibrous). Results: during the first hour interval (07°°-14°°), in the first order (O1) the urinating frequency is increasing slightly from 4-5 cows during the first hours up to 8 cows urinating at the of interval. In the second order (O2) the urinating frequency is almost constant, being lower between 11:00 and 12:00. In the second hour interval (14°°-21°°), in the first order (O1) the lowest urinating frequency was found at the beginning of the interval, when 4 cows urinated, and the highest frequency at the end of interval with 8 cows urinating. In the second order (O2) the urinating frequency is relatively constant, the minimum value of 6 cows being at the middle of this interval, and the maximum of 8 cows at the end of interval. In the third hour interval (21°°-07°°), for both orders, the urinating frequency slightly decrease to 2-3 urinations until midnight, then increase to 8-9 until first hour in the morning.

Keywords: behaviour, Romanian Black and White cows, urinating frequency..

Abstract

The aim of our study was to evaluate the changes of blood plasma Gamma-glutamiltranferase (GGT) and total protein concentrations during the growth of Holstein calves. Blood samples were collected from 20 calves divided in two groups (group 1 from 1 to 3 month of age and group 2 from over 3 months to 5 months of age). Mean value of GGT in group 1 was 32.2 IU/L and 27.2 IU/L in group 2. Mean value of total protein was 7.14 g/dl in group 1 and 6.92 g/dl in group 2. The slight changes in concentrations of GGT and total protein may be related to maturity of organs initiation of specific enzymatic activities or simply physiological adaptation of calves to the new environment.

Keywords: GGT, Holstein calves, total serum protein

Abstract

Blood samples were collected from 25 primiparous Holstein cows divided in three groups (precalving, fresh cows and cows in early to mid lactation). The samples were analyzed for hematological parameters including red cell count (RBC), white cell count (WBC), hemoglobin concentration (HGC), hematocrit (HCT), mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH) and mean corpuscular hemoglobin concentrations MCHC. The results revealed that the values of RBC, HGC and HCT decreased after parturition and them increased again in early to mid lactation. The slight changes in concentrations of HGB, RBC counts, decreased HCT, MCV and MCH sugest iron deficiency. The high WBC count in early to mid lactation of primiparous cows may be related to chronic infections.

Keywords: Hematological profile, Primiparous Holstein cow, Erythrocitic indices, Leukocytic indices

Abstract

The aim of the paper was to evaluate the influence that season has on the water consumption behaviour in lactating dairy cows. Researches were carried out on twenty multiparous Romanian Black and White cows, during summer and winter seasons. Cows were housed in a tied stanchion barn 24 h, and had free access to a water source. Environmental parameters, quantity of consumed forages and milk yield were measured each day of the experiments. Studied traits were: number of drinking bouts and duration of the drinking periods, frequency of the drinking periods, time length between consumption of the forages and first drinking period and time length between milking and first drinking period. Average number of drinking bouts on 24 h registered during winter season was 8.15, and 16.10 during summer season. Differences registered between the two seasons for this trait were significantly statistic ($p<0.001$). Duration of a drinking period was of 0.82 minutes in the winter and of 0.84 minutes during summer season.

Keywords: drinking behaviour, dairy cows, season influence.

Abstract

Sura de Stepa breed, which is on the verge of extinction, has been included in a preservation programme for animal genetic resources (H.G. nr. 822/2008), being raised in a reduced nucleus at S.C.D.C.B. – Dancu, Iasi. Researches were carried out on a number of 30 Sura de Stepa cows, focused on: milk production indicators by successive lactations, genetic determinism at the studied characters and at main lacto-proteins systems, the improvement value of breeding. The quantity of milk per normal lactation at Sură de Stepă population from S.C.D.C.B. – Dancu Iasi, has an upward evolution from 1589.64 kg in the first lactation to 2535.43 kg in the fifth lactation which is also the maximum one. First lactation represents 62.69% from maximum lactation, a value which highlighting the tardiness of Sura de Stepa breed in terms of milk production. Heritability analysis of the studied indicators show medium values for the quantity of milk and fat respectively a hereditary influence greater than $h^2 = 0.71\%$ for percentage of milk fat and $h^2 = 0.57\%$ for kappa–casein (K-cz) from milk. Lacto-proteins systems, beta-lacto globulin (β-lg), beta-casein (β-cz), alpha-casein S_1 (αS1-cz), have a low to intermediate heritability (0.19 to 0.29%)

Keywords: breed, heritability, lacto-proteins, milk, Sura de Stepa, preservation

Abstract

In order to improve the quality and quantity of meat production in cattle in the ICDM Cristian institute and two private farms, Beef Technology and Artificial Insemination was applied. Artificial Insemination was performed with semen from bulls of meat breeds (Charolaise, Bleu Belge, Aberdeen Angus). The average daily gains obtained were between 0.40-1.30 kg / head / day, varying based on race, sex, technology applied, etc.

Key words: average daily gain, cattle, meat production.

Abstract

We investigated the influence of the factors herd-year, breed-type, sire, and milk production and lactation length on the fertility traits of Holstein cattle (age at first calving, calving interval, days open, non return rate at 56, 72, and 90 day). The data were received from 87 230 Holstein cows first time calved in period 2000 and 2008 with three full-term lactations. Average age at first calving was 875 days and average milk production on first, second and third lactation was 6816 kg, 7524 kg and 6536 kg, respectively. Coefficient of determination estimated by linear model with factors as join herd-year effect and sire was 0.1164 *(P<0,001)* and 0.1145 *(P<0,001)* for variation of calving interval after 1st lactation and 2nd lactation, respectively. When the quadratic effect of milk production and lactation length was included to the linear model, coefficient of determination for calving interval variation increased significantly to 0.7049 *(P<0,001)* after 1st lactation and to 0.6297 *(P<0,001)* after 2nd lactation. Basically on these results including milk production and lactation length to the fertility genetic evaluation is needed.

Key words: fertility traits, milk production, genetic evaluation

FUR ANIMALS

Abstract

The work aimed at the analysis of the factors that influence conformation traits, included animal size and fur quality traits in four colour types of mink: standard, pastel, platinum and white Hedlunda. The data concerns the evaluation of animal conformation traits in the period of three years. The analysis of variance of particular traits indicates statistically significant effect of the year of birth, colour type and animal sex on the majority of analysed traits. Higher means of license evaluation were obtained by males in majority of the traits. Statistic analysis of body weight showed that the highest body weight characterized males of platinum and white Hedlunda colour types. Minks of standard and pastel colour types were characterised by lower body weight. The mean body weight of males was 2581.17g and of females 1401.42g (there is a clear sexual dimorphism in minks). Minks of white Hedlunda colour type were characterised by the highest means of colour purity, both males and females. Other colour types obtained lower means. The best fur quality characterised platinum minks. Variability of traits, measured by variability coefficient, had the highest values in animal weight (in grams) and ranged from 6.0 to 32.0%. Variability of total number of scores ranged from 2.00 to 8.20%. Positive phenotypic correlations were the highest between body size (in points) and total number of scores (0.676), while the lowest were obtained between body size (in points) and fur quality (–0.178).

Keywords: mink, animal size, fur quality, colour, correlations, variability

Abstract

The work aimed at the analysis of the influence of colour type on chinchilla utilitarian traits. Research concerns animal size and fur quality traits. The data for the analysis was collected from the breeding farm „Raba" in Myślenice (southern Poland). The data concerns standard and Polish beige chinchillas and covers 3 years. The analysis included the following factors: year of evaluation, animal sex, colour type and interactions of these factors. The analysis of variance proved statistically significant influence of the year of evaluation, colour type and animal sex on evaluated traits. The year of observation influenced significantly animal weight, fur colour purity, colour type, fur's paunch part and total number of scores. Colour type influenced significantly animal weight and fur colour purity. Animal sex influenced significantly animal weight, animal size, animal build, fur quality, fur colour purity and total number of scores. Arithmetic means of studied traits during 3 years reached various levels, depending on colour type and animal sex; e.g. animal weight (in grams) in chinchilla ranged from about 560 g to 620 g. In what concerns total number of scores (in points), e.g. males of standard colour types were evaluated higher than females of beige colour type, while females of beige colour type obtained higher notes when compared with females of standard colour type. Variability coefficients, depending on traits, varied from 7.15% to 26.17%. It can prove that chinchillas which obtained very high notes in some traits had lower notes in other traits and consequently total number of scores was equalized. Phenotypic correlations were also estimated and ranged from -0.089 to 0.721.

Keywords: chinchilla, animal size, fur quality, colour, variability

HORSE PRODUCTION

Abstract

In the view of controlling the energetic capacity of the horse is necessary the constitutive elements measurement: force, speed and resistance. In the state studs starting with year 1920 were been applied different tests named qualification tests. The obtained media at qualification tests reported to actually applied performances notation system situate the youth hybrid in very well success category and Nonius youth to well success category. This fact emphasized a good management of training program and a good amelioration in the way of speed increasing.

Keywords: Nonius, gallop, saddle, hybrid, trap.

PIG PRODUCTION

Abstract

The aim of our study was to assess the welfare of pregnant sows housed in collective pens, based on indicators such as behavior, skin lesions and lameness in two commercial farms where the floor area (A- continuous, B- slatted) and environmental enrichment have been different. Observations were made on 120 pregnant sows (LandracexLarge White), during pregnancy period. Behavior was assessed by direct observation, and each event was expressed in terms of total active behavioural manifestation. Skin lesions were rated on a three degree scale from 0 to 2 (absence of lesions, surface lesions, severe lesions). Investigation behavior was clearly shown in B pens (67%) compared with A (52%) in the first and last weeks of gestation; a high incidence of positive social interactions was recorded in A pens (21%). Number of sows with lameness was higher in A pens (3,9%) compared with B pens (1,7%), and the skin lesions of 4,5% in B pens. All indicators monitored have recorded changes in both pen types. The welfare of pregnant sows should be evaluated using different criteria depending on breeding technology.

Keywords: behaviour, housed, pregnant sows, welfare

POULTRY PRODUCTION

Abstract

The aim of this research paper was evaluated the meat performance cocks and hens of breed Oravka after reproductive and laying period. The results from this study show that carcass yield cocks and hens of Oravka were higher in comparison with STN 46 64 15 (72.84, respectively 71.02%). We recorded that sex had statistically significant effect on some carcass characteristics (live weight, carcass weight, breast weight, things weight and back weight). Anyhow, we found that sex affected abdominal fat weight (in profit of hens) and percentage of some carcass parts - percentage of breast (in profit of hens) and percentage of things and back (in profit of cocks).

Keywords: cock**,** hen, live weight, meat production, Oravka

Abstract

The live weight of Oravka and other pure hen's breed (New Hampshire, Plymouth Rock, Rhode Island) have been detecting in monthly periods. We found statistically significant ($P<0.05$) difference of higher live weight of New Hampshire from the 8 week of age and statistically significant ($P<0.05$) lower live weight of Rhode-Island from the 12 week with Oravka. The breed Plymouth Rock had no statistically significant ($P>0.05$) difference with Oravka. Growth tendency remained unchanged till the end of rearing period at the age of 24 weeks.

Keywords: breed**,** growth ability**,** live weight, Oravka

Abstract

In our research four live attenuated vaccines against avian infectious bursitis (two inland produced and two imported) were tested: *Biavac*, *Biaromvac-Pa*, *Gumboro Vaccine Nobilis 228e* and *Live Virus Vaccine Tablets Gumboro, M.B. Strain.* The research was made in production conditions on 44,400 broiler chickens maintained in industrial system and raised on bedding and in batteries. The broilers were kept in four poultry houses, each of them representing an experimental group. We mention that vaccines were administered only one time. Vaccines efficiency was assessed by immunoenzymatic test. In that purpose, for each poultry house, 20 broilers were isolated and identified by a tibial ring, their immune response being followed between 5 and 42 days of age. Analyzing the results about individual antibodies titer during the experiment, the significant differences were observed both in poultries and phases. The best results were obtained using Live Virus Vaccine Tablets Gumboro, M.B. strain.

Keywords: antibodies, avian infectious bursitis, ELISA, vaccination.

Abstract

If we want to find replacement to use of antibiotics, we must search more naturally alternative methods. Such method can be also used with probiotics in poultry nutrition. By the help of them we can achieve better health state and higher increase of live and slaughter weight. We tested the effect of probiotic Propoul in the experiment. We applied two different doses of probiotic at three hybrid combinations broiler chicks (Ross 308, Hubbard JV, Cobb 500). We watched difference among live weight, body symmetry and feed conversation. In all hybrids we found statistically significant difference ($P<0,05$) between experimental groups and control group, only experimental group 2 and control group at hybrid Ross 308 we found statistically significant difference ($P<0,05$). We did not find the difference between experimental groups. With the application of probiotics are reached better feed conversation in experimental groups against control group. We did not find statistically significant difference in body symmetry.

Key words: broiler hybrids, feed consumption, live weight, probiotic

Abstract

This study was conducted to investigate the effect of supplementation of the probiotic preparations with different probiotic strain on the basic fattening parameters of broiler duck males. The experiment was carried out in half-operation conditions experimental base of Department of Poultry Science and Small Animal Husbandry of Slovak University of Agriculture in Nitra in three-floor cage technology. Totally 45 one day broiler duck males of hybrid PKB divided into three groups: control group - without addition of probiotic preparation, experimental group 1 - addition of probiotic preparation of Propoul with strain Lactobacillus fermentum in powder form into drinking water in dose of 0,90 g daily during all experiment, experimental group 2 - addition of probiotic preparation Protexin Concetrate with strain Enterococcus faecium in powder form into drinking water in dose of 0,24 g daily during all experiment. The results from this study showed that supplementation of pro-biotic Propoul and Protexin Concentrate in drinking water caused improvement of basic fattening parameters of broiler duck males. Probiotic preparation Propoul manifested as prepared with higher effect on fattening parameters (live weight, average daily weight gain, feed consumption, mortality) in comparison with probiotic Protexin Concentrate.

Keywords: Broiler duck, probiotic, Lactobacillus fermentum, Enterococcus faecium, fattening parameters.

SHEEP AND GOAT PRODUCTION

Abstract

Aim of the present study was to determine the body weight in indigenous adult sheep breeds, reared in the western part of Romania. The study was carried out on a number of 3457 adult sheep (rams and breeding ewes), from following breeds: Turcana – 1511 heads; Tigaie – 1573 heads and Transylvanian Merino - 373 heads. Measurements were made in 22 farms from the counties Arad, Bihor, Timis and Caras-Severin. Animals were separated into four group for each breed studied: gimmers, shearing's, ewes and rams. Body measurements were conducted in spring, between 1st of April and late May 2009. Animals were measured using an electronically scale, measurements were made just after shearing. The average body weight for Turcana registered was of 43.68 kg for gimmers; 4-58.34 kg for shearing's; 5-43.83 kg and 6-73.08 kg for mature ewes, respectively mature rams. For Tigaie breed, averages were of 45.66 kg in yearling ewes; 67.25 kg in yearling rams; 50.57 kg in ewes and 73.76 kg in adult rams. While for Transylvanian Merino, averages were of 45.96 kg for yearling ewes, 47.67 for yearling rams, 58.70 for ewes and 64.22 for mature rams.

Keywords: Tigaie, Transylvanian Merino, Turcana, sheep, body weight

Abstract

The research was done on carcasses from the slaughter of young male sheep intensively fattened belonging to the local Tsigai race of mountain ecotype and its half-breeds with Suffolk and German blackface (GCCN). The purpose of the research was to determine Logissimus dorsi (LD) and leg of moutton area, because these parts provide information on I[st] meat quality. Research results have noted that lots of half-breeds achieved higher *Longissimus dorsi* (LD) and leg of moutton area, compared with the pure breed batch. Compared with Tsigai breed, *Longissimus dorsi* (LD) area deterrmined was higher with 10,75% to Suffolk x Tsigai half-breeds, and 0,07% respectively to German Blackface x Tsigai half-breeds. Leg of moutton area was higher with 17,27% to Suffolk x Tsigai half-breeds, and 2,75% respectively to German Blackface x Tsigai half-breeds. Research carried out special information on I[st] meat quality on carcass.

Keywords: half-breeds, meat, sheep, surface, young

Abstract

Research purpose is to obtain information on the development of carcasses obtained from Tsigai race and its hybrids with Suffolk and German blackface breeds. The results showed that hybrids Suffolk x Tsigai and German blackface x Tsigai have made a better form of carcass compared with Tsigai race, being superior with 1.86% to the Suffolk x Tsigai hybrids and 1.48% German blackface x Tsigai hybrids. Regarding the index of carcass compacted, its value is around the value of 100% in all three groups. The best development of the leg of mutton is found at Suffolk x Tsigai hybrids. Value of leg of mutton development index was 203.58% for hybrids with race Suffolk, being superior with 14.91% compared with Tsigai race, while the index value at German blackface x Tsigai hybrids was higher only 4.56% compared to Tsigai breed. The best proportionality of leg of mutton meets to the Suffolk x Tsigai hybrids, the index value was 65.42%, with 11.05% higher, compared with Tsigai race. At German blackface x Tsigai hybrids, the index was higher with 6.45%, compared with that obtained at Tsigai breed. Carcasses obtained from hybrids are appropriate format, to those corresponding meat breeds.

Keywords: carcass, format, hybrid, index, sheep

Abstract

The study was been performed to emphasizing the dynamics of immunological parameters in healthy and parasitically infested youth sheep from different private herds from Timiş district. The researches were been made on 20 youth sheep 10-11 months aged from Ţurcana breed divided in two groups: first group (M) comprised 10 healthy sheep periodic treated with antiparasitic drugs and the second group (E) contained 10 sheep who never received any antiparasitic drugs. All animals are clinical healthy, but those of E group are more skinny and have long and bristled fleece. From both groups were been taken blood samples in the view of evaluation the dynamics of unspecific immune response, represented by some parameters, like seric properdine, seric lysozime, phagocytic index and leucogramme. The obtained results confirm that immune system in infected animals always tried to counteract the noxious action of parasitic agents through increased values of studied parameters. A coproscopic examination of both studied groups identified first instar larvae of Dictyocaulus filaria and Trichostrongylus spp. in E group.

Keywords: leucogramme, phagocytic index, seric lysozime, seric properdine

Abstract

Aim of this paper was the monitoring of average daily weight gain, from birth until 35 days, of crossbreeds Lacaune x Spanca lambs. Researches were carried out in S.C. Unicon 2000 3N SRL from Arad County. Results of the present study revealed that body weight at birth, 9 and 35 days, and average daily weight gain 10 to 35 days and 0 to 35 days are significantly higher in crossbreed lambs Lacaune x Spanca born as singles (n=9), comparative with those born as doubles (n=6). Results suggest that single lambs crosses between Lacaune and Spanca during first 35 day of life, achieve on average daily weight gains of 232 g, a value very similar to the value of the Lacaune standard breed for meat-blood line (246 g).

Keywords: average daily gain, crossbreeds, Lacaune, Spanca

Abstract

Aim of this research was to determine the measure in which 100 g/head/day lecithin has an effect on the ruminal parameters and growth indices in lambs during the fattening process, compared to a normal ration which consisted of alfalfa hay and a concentrates mixture. Experiment was carried out on two experimental groups (n=10) of fattening Turcana lambs, from 138 to 176 days of age and an average weight of 28 kg. For the same level of feed consumption, lecithin improves the average daily gain by 14.85%, while the consumption rate for proteins and energy was 12.9% lower. Following lecithin administration the number of ruminal bacteria increasd to 4.52×10^8 cfu/ml ruminal fluid compared to the average of 3.68×10^7 cfu/ml for the control diet. Lecithin has as effect the reduction of the protozoa number by 168,944/ml ruminal fluid and the species are less diversified.

Keywords: growth indices, lecithin, fattening lambs

Abstract

The aim of the study was to determine the fat and protein content from goat colostrum and milk at weaning the kids. Also, the growth rate of kids was determined during the 50 days of milk feeding period. The experiment was carried out on 8 Carpatina breed goats with their twin male/female couple kids (n=16). Fat and protein content is significant higher ($p<0,001$) by 8.12 and 13.2 percentage points, respectively compared to normal goat milk. Body weight at birth was on average 2.72 kg for females and 2.89 kg for males. At the end of experimental period, body weight of males was 2.15 kg higher compared to females. Average daily gain during the milk feeding period was

41.97 g/day significantly higher ($p<0.001$) in males (168.85 g/day) than in females (126.88 g/day).

Keywords: goats, milk quality, kids, growth rate.

PROCESSING OF ANIMAL PRODUCTION

Abstract

Food has played, plays and will play a decisive role in the existence and development of human society. The level of food quality, causes physical, social and moral society health. In this sense food security is an essential goal of economic and social development, being an essential component of security of life and national security.

Evolution of the Common Agricultural Policy (CAP), in terms of food security, was due not only changes in agriculture, but also came in response to the demands of society in general. Amoung these is growing concerns about hygiene and food safety and animal welfare.

European consumers want safe and wholesome food and the EU wants to ensure that all its citizens consume food with high quality standards. Food safety policy has undergone an extensive refurbishment. The objective of this reform was to ensure that EU legislation on food safety is as complete as possible, and consumers benefit as much information about potential risks and measures to be taken to minimize them.

The goal of a modern economy, is the correlation of quantitative and qualitative food production with consumer demand. It thus requires knowledge of the physiological needs of consumers, leading to demand for agricultural products.

Keywords: food consumption, food needs, food security

Abstract

Milk and its derived products are a staple food in human nutrition. A suitable food system does not accept food rations which provide milk and milk products in their structure. These considerations have led to increased consumption of milk and its derivatives. For the future, it is predicts that both milk and milk products will occupy an important place in daily human consumption compared with other animal products. Occupying second place, in importance, the Romanian agriculture, after meat production, milk and milk products sector is one of the most important sectors of Romanian agriculture, representing in 2007, 25.03% of total agricultural production and 9.59% from animal production. The restructuring of Romanian agriculture has as a result reducing or even destroying the material base both in agriculture and processors industries. Also, reduction of livestock has like result the reduction of agricultural production animals - an important part of raw material in food industry. Milk production, a major component of animal production, it has faced such problems. Thus explains the decreasing trend in milk production for processing in the period 1990-2000, following a restructuring of the dairy sector industrialization, oversized compared to the productions obtained.

Keywords: milk production, self-consumption, milk processing

Abstract

During the experimental stages, the researches aimed to establish the prevalence of *Y. enterocolitica* bacteria on swine, in the butchering flow. The experiments developed on a large number of test specimens (800), sampled starting with the moment of animals receiving and until the final product was obtained.

For isolation and identification there were used a modified method, proposed by The International Organization for Standardization, and CIN and SSDC isolating cultures as well. Following the effectuated researches, in accordance with the international ones, we can conclude that, in the present, the butchering process allows the strict observance of the hygiene and disinfection conditions with the purpose of limiting the dispersion of *Yersinia enterocolitica*, which favors the phenomenon of inter-contamination.

Keywords: alimentary toxic infections, identification, isolation, *Yersinia enterocolitica*.

Abstract

Due to the fact that, for a few years now, our focus is more and more concentrated on safety and security of meat and vegetable products, this study's aim is to evaluate the quality of certain well - known meat products (sausages, dry salami, and half-dried salami), purchased in a supermarket, from Timisoara. Microbiological tests were made especially on sanitary microbiological indicators (*Escherichia, Enterobacter, Klebsiella*). These tests emphasize hygiene in processing ang handling of products. In some cases, it higtlights how various heat treatments (pasteurization type) apply to food products. It also establishes the microbial load on the microscopic field and the colony forming units, by a culture method in plates, at 37º C for 48 hours. Based on the obtained results, it has been established that, concerning the microbial load and the presence or absence of coliform bacteria, studied products fall into the quality permitted by applicable law.

Keywords: meat products, sanitary microbiological indicator,

Abstract

The quality of meat preparations, in terms of binding compositions, is directly influenced by the degree of extractibility of structural proteins, which in turn is influenced by a number of factors such as quality of raw and auxiliary materials, how various operations are conducted the technological process, type of equipment used, etc. This paper aims to follow how the degree of extractability of sarcoplasmic and myofibril proteins it is influenced by chopping and the type raw material. From experiments it was found that the degree of extraction of proteins increases with increasing chopping to a time when extracting a slight regression. For the same chopping stroke by degree of extraction is higher for samples obtained from pork and the evidence obtained by adding water cooled.

Keywords: chopping, myofibrillar proteins, sarcoplasmic proteins

Abstract

Chopping meat is an important operation in the technological process to obtaining meat products, which can have negative implications on quality of emulsions and on the properties of finished products when temperature rises recorded during the process is not kept in check by adding water-cooled or ice flakes. Experiments showed that the largest increase in temperature and the highest heat generated in chopping have been reported for the compositions obtained from beef meats, without added water cooled, the lowest final temperature recorded in the case of compositions of pork that was added cooling water. Power required registered at chopping, fell towards the end of the process of chopping, as a result of reducing the size of fragments of meat.

Keywords: chopping, heat generated, temperature

Abstract

The chemical composition of the meat is one of the most important characteristics. For the fish meat quality there are only few specific data comparatively with those that exist about animal meat. The results obtained from a study done on the meat quality of the fish specie Clarias gariepinus (African catfish) with a body weight of around 1200 – 1550g are presented in this paper. The obtained results emphasized a great quality of the Clarias gariepinus meat. The meat proteins content had a big value and it was indirectly proportional to the body weight. The meat hydration was higher in fishes with low body weight and indirectly proportional to the fat content. Taking in consideration the fat content of this meat, it can be concluded that the African catfish could be included in the half fat fish category. The meat caloricity calculated is growing proportionally to the body weight, being influenced by the fat content.

Key words: Caloric value, chemical composition, Clarias gariepinus.

Abstract

The quality of fish meat is very different than animal meat. The physical, chemical and bacteriological characteristics of three different fish species (carp, pike, and catfish) were examined in this study. All of these characteristics were examined after sampling and then after 24, 48 and 72 hours of refrigeration between + 2 and + 4ºC. For all three types of fish meat the physical and chemical indicators (pH and total volatile bases nitrogen) had an ascendant evolution in this period. The values of these parameters had overrun the admitted limit after 72 refrigeration hours. The biggest values for the studied characteristics were recorded in the pike meat. The bacteriological indicators studied (mesophilic and psychrophilics bacteria) were in the limits of meat salubrity at the beginning of the refrigeration period and their values were kept at the same level for a period of 24 hours. After 48 hours of refrigeration. in the pike meat both indicators had bigger values than the meat of the others fish species. After three days of refrigeration the differences were more accentuated and this was more evident for the psychrophilic bacteria.

Key words: Fish, freshness indicators, salubrity

Abstract

With over twenty years ago, Romania was a big producer of meat, with breeding pigs steers and lambs farms, throughout the country. At present, the meat industry has declined considerably. For many years, however, Romania from the exporter of meat has become a fresh meat and meat products importer. Meat consumption per capita in Romania is about half the EU average (92 kg). Romanians show a strong preference for pork, although chicken meat consumption is increasing. The current financial crisis will trigger a decline in terms of meat consumption in EU countries including in Romania.

Keywords: beef, meat, mutton, pig, poultry, production

Abstract

The paper provides an analysis and documentation in the dairy supply. The dairy sector is of great importance to the European Union (EU) in a variety of ways. Its most striking feature is that milk is produced in every single EU Member State without exception. Milk production is on the second place in Romania's agriculture after meat production. Romanian milk and dairy production and consumption registered significant changes over the last years and it is foreseen to be emphasizing in the next period. The most important event which influences the production and consumption is the integration of Romania in European Union.

Keywords: butter, cheese, dairy, milk, production

Abstract

The aim of this study was to emphasize the presence of biofilm on meat surfaces using epifluorescences microscopy and establishing the microbial contamination level by classical microbiological methods. The research was performed in a pork slaughterhouse. The presence of microbial biofilm and the level of contamination were performed on surfaces from pig carcasses and cut pieces. Clusters of microorganisms included in a biofilm matrix were found on the surface of carcasses on sternal region, coast region, coccigian region and on surfaces of cut pieces: chop, front of thighs. Microbial biofilm was present on carcasses and cut pieces at least 3 days length, in regions with high humidity and microbial contamination level ranged of 10^2- 10^3 cfu/ cm^2. The microbial load of the surfaces was assessed using the following microbiological indicators: *total viable count (TVC),* the *number of enterobacteria* and *Pseudomonas* genus. The level of carcasses contamination ranged on average from 1.3 x 10 cfu/ cm^2 (neck) to 2.6 x 10^3 cfu/cm^2 (front of pulp). The proportion of *Enterobacteriaceae*-positive samples was 60%, with a low level of

contamination (less than 1 cfu/ cm^2). Germs of the *Pseudomonas* genus were absent in all the analyzed samples.

Keywords: biofilm, microbial contamination, pig carcass

Abstract

The main objectives of this paper were microbiological parameters which characterized the Telemea cheese for each season, assessment of technologies and thus assortment defects as well as projection of hygienic solution for obtaining qualitative products according to actual standards. We studied 5 units of Telemea cheese processing replaced in different area. For obtaining concrete results we used STAS methodologies and analyze procedure was based on observation, mathematical estimation and experiments (in lab and processing units).

Keywords: microbiological parameters, technology, hygienically solution, quality

Abstract

Transformation of milk in Telemea cheese is a complex process based on proteins concentration with a variable percent of fat and mineral substances and elimination of lactose and water in important quantity. The transformation of milk in different assortments of cheese is an important argument for developing of this production (stability in storage, long time conservation, easy transportation and human diet diversification).The research was effectuated in 5 processing Telemea cheese unit, in 2 seasons, summer and winter. Were made 15 determinations for each unit and period and dates obtained were interpreted by statistical methods.
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Keywords: cheese, conservation, fat, mineral substances, proteins.

Abstract

In order to follow the modifications in time of milk nitrites quantity which are contained in cheese, we created the follwing experimental model. From the same known milk quantity with a known fat content we formed 4 milk control groups in which we added different natrium nitrites quantities (20, 40, 60 mg natrium nitrits in 100 ml milk). After each milk control group processing we analyzed the clot and the whey in order to establish the nitrites content. We performed analyzis from cheese and salt over 21 days with one week break.
Obtained results evidenced that during cheese processing the nitrites quantity is 3 times reduced depending on nitrites milk content.
During maturation nitrites are distributed in cheese and salt and are progressively reduced leading after 21 days to a decrease under the maximum admitted level of 7 mg%.

Keywords: Nitrites, cheese, milk.

Abstract

Large spectrum antibiotics used in different cow diseases leads to their release in milk altering its proprieties during processing. Knowing the inhibitory effect of antibiotics upon lactic bacteria development and multiplying we followed the effect of gentamycin, a large spectrum antibiotic added in different doses in milk used for yogurth processing. In our research, besides the effect of antibiotica we followed also the influence of milk fat content upon milk clotting time, while antibiotics added in milk incease the clotting time of yogurth. Clotting density deceases proportional with the dosis of antibiotics added to milk.

Keywords: yogurth, gentamycin, milk

MANAGEMENT AND MARKETING

Abstract

Romanian husbandry is better and better every year. In this context, the most representative results are in pig production, where the quality of carcasses is comparative to that of the other E.U. member states with high performances in this field. The methods of classification we have used were acknowledged by the Commission of Classification of Swine, Bovine, and Sheep Carcasses in Romania, i.e. optic probe (the apparatuses Fat-o-meat'er and OptiGrade-Pro), as well as the ZP (Zwei Punkte) method. Most Romanian pork carcasses (over 99.0%) range among E and U high-quality classes. This is more than satisfactory from the point of view of the qualitative evolution of pork in Romania. The results obtained by the Romanian pig breeders were remarkable in 2009, i.e. superior compared to those of the previous years. The implementation of the EUROP system for pork carcass classification in Romania has largely generated expected results.

Keywords: carcasses, grading, quality, EUROP system, pork

Abstract

The „*EUROP"* grading system supplies the opportunity of generalising pork quality in the E.U. The market price of Romanian pork carcasses in 2009 has some characteristics depending on quality classes. Among member states of the E.U., Romania ranks 9 from the point of view of the share (4.0%) of establishing market price for pork carcasses. In Romania, in 2009, they graded over 2.8 million pork carcasses, but only about 2.3 million made the object of commercial transactions as carcasses. The price of pork carcasses in Romania in 2009 varied between 554,840 Lei/100 kg carcass in the Dobrogea County and 872,633 Lei/100 kg in the Arad County, the pondered average being 662,736 Lei/100 kg of carcass. If the price of pork carcasses in Romania is lower than that of other E.U. member states, their quality reaches the level of the most performing states in the field of pork. Romanian experience and tradition in the breeding and exploitation of swine are now, together with the implementation of the EUROP system, considered as most valuable.

Keywords: carcasses, EUROP system, grading, market, quality, price, pork

Abstract

In every household there are many family activities that provide the necessary income or living foods. Some activities are related to cultivation of land, others for breeding other means services provided by the vilagers. The products of the own household must cover 40% of meals offered to tourists. These products are produced by the householder work in their household, the tourist having the opportunity to observe how the products are produced and participate effectively in this production.

Specific rural household products can be recovered through tourism by both indirect and direct ways. Both variants can generate increased profitability and interest of the tourist business activity and impose a sense of satisfaction for quality benefit, issues that may be, in turn, assumptions favorable to the extension of this work.

Keywords: agro-household, capitalization, local products

Abstract

Cattle husbadry occupy and will occupy a priority place in the economy of animal production in our country. Their increasing importance is given by the variety of products that they provide. Cattle husbadry is a traditional activity of the country. Variety of products they carry out, reduced energy consumption and nature kind of feed they consume, gives growth and and exploitation of cattle activities a sustainable and perpective character. There is also the possibility to export beef cattle witch can provide large profits for producers. Can be regarded as a source for trade and also provide stability of employment in rural and mountain area.

According to Euromonitor International study, Romania is placed first among states in developing the annual average growth of the dairy market in the 1998-2006 period, namely 25.8%. The Romanian market of dairy products was estimated at nearly one billion dollars last year. According to the Ministry of Agriculture, Forestry and Rural Development informations, demand for milk and milk products in Romania went up with 1.5% until 231.1 kilograms per inhabitant.

Keywords: cattle husbadry, comparison, evolution, existing livestock, Romania

Abstract

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

Keywords: cattle, economic indicators

Abstract

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

Keywords: economic indicators, seeps

Abstract

Maximum values of dry matter and fat (% of the carcass weight) is achieved in swine exploited on small private family farms at 137 kg of dry matter and 115 kg of protein. Slaughtering swine at higher weight results in an increase of the dry matter and of the caloric value because of the increase of the amount of fat in the muscular fibber; thus, pork is of low quality because of the massive accumulation fat substance and the economic efficiency of producing pork is improper, with supplementary expenses on feed. Fattening swine on small family exploitations up to over 11 kg results in changes of the meat /fat ratio, detrimental to pork meat because of both thickening of lard on the animals' back and of fat depositions in the muscular fibber; though this improves pork quality, it is done with high expenses of energy, resulting in inefficient exploitation on private family farms that in most cases only supply for their families and rarely sell extra production.

Keywords: carcass, family exploitation, quality, pork, swine

Abstract

Sows treated with medicine 3 days before parturition and 4 days post farrowing with medicine premixes containing dimetridazol 1% delivered piglets with higher hybrid vigour that, during the sucking period, yielded higher growth gains; their death and morbidity rates were also lower compared to the control lot that was not fed medicine fodder. In sows treated with medicines we noted 11.0% MMA syndrome; during the 1 and the 2^n heat cycles, 95.8% of the SOWS treated with medicine were in estrum and had to be mounted, compared to only 81.0% of the control lot: the sows in this last lot had 32.0% MMA syndrome, resulting in a high sterility rate.

Keywords: average daily gain, breastfeeding sows, estrum, MMA syndrome, piglets.

Abstract

The classification of pig carcasses aims at a correct payment for big breeders, depending on carcass weight and quality, and standardization, the common language of the international meat trade. The European Union set uniform procedures of quality assessment (the EUROP system), defined by the same parameters in the entire continent.
The pig livestock whose carcasses were classified in 2008 was almost 2.5 million, compared to the value below 2 million carcasses classified in 2007. Of the total livestock, in 2008, about 98% could be classified in the superior quality classes E and U. In the previous year, only 94% of the classified carcasses could be introduced into these superior quality classes. The increase of 4%, related to the number of 2.5 millions corresponding to 2008, represent more than 97.000 pigs whose carcasses belong to the superior classes, compared with the previous year.

Keywords: carcass, classification, pig, Romania

Abstract

In the period under review shows a downward trend in the evolution of swine herds affecting insurance requirements for meat and meat products both regionally and throughout the country. Reduced number was due largely bankruptcy phenomenon of breeding pigs and operating a centralized private-family farms and inability to produce biological material for fattening performance due to a bad management practice. Massive reductions across the swine herd is due in large part, losing the European market and as a result of reduced meat quality and pricing is high enough in relation to the global market for pork. The most drastic decrease is found in 5 Western regions, followed by South-Muntenia were where concentrated the largest flocks of pigs.

Keywords: development region, livestock, pig, Romania

Abstract

If we admit that rurality designates small densities, open areas, small settlements below 1,000 inhabitants, and land reserved mainly to agricultural and forestry practices, and as natural area, if we admit that society tends to be traditional and that government al policies tend to conserve rather than to make rapid or radical changes, then we should admit that rural tourism should be an activity generating new incomes in the area. Rurality also means preserving a continuum in the approach of different types of areas with different characteristics, a concept that can also be of use in the identification of activities specific to rural tourism. Be they activities specific to the rural environment or activities common to the rural area, they need to aim at the conservation of rurality as a main tourism resource. Managerial strategies in rural tourism contribute effectively to rural development, provided they are sustainable and that rural tourism be not the only solution for rural development.

Keywords: conservation, managerial strategies, rural tourism, sustainable rural tourism

Abstract
Passenger air carriers will be able to systematically overbook transport capacities on certain aerial routes due to the quick adaptation to modern trading means, to the modern promotion of services and to the modern means of information of potential travellers. Though ticket booking in aerial transport made its debut as a simple process of automation of ticket sale, it soon turned into a strong marketing instrument with unexpected effects on competitiveness on the market of tourism aerial transport. The use of modern ways of operating Computer Reservation Systems and Billing Settlement Plans by passenger air companies and by tour operators improves service standards.

Keywords: major changes, passenger air transport, promotion, trading

Abstract
Blue Flag is a high standard symbol of environmental protection and it is awarded to the beaches and agreement ports by the Foundation of Education for the Environment. The beaches having been awarded this distinction warrant particular protection for their visitors, which is a particular point of tourism attractiveness: the result, they are preferred by tourists and, therefore, by tour operators selling tourism packages for the littoral. In 2009, Romanian beaches were not awarded any *Blue Flags*.

Keywords: Beaches, Blue Fag, Romania, tourism facility

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Abstract
At both world and national level, transnational policies in the field of tourism, in general, and of cultural tourism, in particular, come from the U.N.E.S.C.O. and from the W.T.O. represented by the U.N.O., while at European level these policies are exclusively the result of the European Union and of the European Council. National policies in the field of cultural tourism in Romania are developed by the Ministry of Tourism, and are included and detailed in the Master Plan for the Development of National Tourism. Though the number of associations, committees, councils, organisations, and other organisms dealing with world and European tourism is larger, at national level the National Authority of Tourism does not supply the necessary instruments to achieve sustainable development in the field of hospitality and of tourism, lacking marketing policies and coherent promotional strategies based on detailed understanding and on hierarchy of source markets.

Keywords: cultural tourism, policies, recovery opportunities

Abstract

Stock-breeding is one of the oldest human occupations. A fact that has always raised interest is that the breeder's degree of involvement influences the animals' well-being. Some elements of the breeder's personality, his character, aptitudes and skills, are significant for the organization of the farm so that it becomes profitable, especially in creating proper life conditions for the animals, as well as insuring an optimal atmosphere for the employees. One of the breeder's standards is the animal's well-being. It can be achieved with the help of the breeder's skills, efficient farm management and due to proper and well maintained equipment, thus adding up to the breeder's managerial qualities.

Keywords: animal well-being, aptitudes, character, farmer, motivation, skills

Abstract

This paper is a study concerning the motivation and importance of fish and fish product consumption. The study was carried out on a sample of 112 students (from two high-schools in the Caras-Severin County and from the BUASVM in Timisoara, Timis County) aged 18-25. The main goal of this study was to assess briefly the future fish consumer in the context of the increasing world fish and fish product consumption. The subjects has to fill in a questionnaire containing 15 open-answer questions and close questions concerning the frequency of fish consumption, their preferences, choice criteria, and consumer rights. The results were relevant from the point of view of fish consumption, of the species preferred, and of the awareness concerning the importance of fish in the healthy diet; but it supplied les satisfactory conclusions concerning the preferred type of fish and fish products (frozen) and consumption frequency.

Keywords: fish consumption, fish products, young adult

Abstract

The internalization of using resources is meant to empower the local economy, and under the current crisis circumstances it could help as a powerful tool to the recovery of the rural sector. From the farming point of view, the cutting cost policy is the main theoretical justification for internalization of actives, and by extension, of activities, and in the European case it concerns the entire continental economic system. Internalization emphasizes the protectionist economic activities, mainly in line with anti-crisis measures for guiding markets. This persisting discrepancy among European states in terms of development and yearly performances emphasizes the necessity of empowering the internal efforts of our country in the field of production, and agricultural production. This is a new shape of introducing the dirigisme and the macroeconomic interventionism as a fundamental tool against the negative effects of the economic slowing-down, especially in zoo-economic activities, after many critics addressed to the centralized economic intervention.

Keywords: costs, internalization, rural sector

Abstract

In present times any kind of activity is considered as a project, which has a complex characteristic and which involves a new vision starting with the analysis of the project needs and finishing with the efficient re-usage of the project results. The pressures of the global economical and political competitive system of the contemporary world, the competition between producers, a higher respect for the value, and the wellbeing of those who compose the human resources of the project and implicitly for the cost generated by the work factor led to the development of new techniques of project management. The first one who offers what the client wants is the winner and has all the chances to survive in a competitive system. The solution is to realize success projects using an efficient project management. A performing business means an investment in a successful project, with predictable and planned activities. This study wants to identify which are the main causes which lead to the success or failure of a project. In any field some projects were serious and expansive failures and this is the reason why we need to know how we can improve the knowledge and the practice when we conceive and develop a project.

Keywords: causes, failure, project, success

Abstract

The risk management and the risk manager are mandatory elements for a success activity in business and implicitly in projects. Avoiding the risks is a sure way to failure. A higher risk can lead to a higher benefit. « The higher risk is the absence of the risk ». If the risk exists, through risk management it can be controlled, but if the risk is not identified, certainly there are hidden risks which difficult to control. An improper risk management can generate important financial, political and even human losses. It is necessary to implement a risk management system which becomes an important objective both for the project itself and for those involved in realizing it. Even if the risk management is not an easy and cheap activity, the risk should not be considered as a negative element because it can offer extraordinary opportunities for those who know how to valuate it. One of the main objectives of the projects must be the identification of the risk in order to valuate it for the own benefit. Looking behind we can realize that the existence of risks led to the development of risk management structures, if the risk would have been avoided the humanity would not have progressed.

Keywords: management, risk, strategy

Abstract

The financing mechanism of CAP pillar II – Rural development has suffered, during time, significant changes, determined by the need for improvement and also by the experience achieved in this field by the European organisms and the member countries. The attaining of a rate as big as possible of the capacity of absorbing European funds represents a real „challenge", especially for the new member states.

The implementation of the National Program for Rural Development 2007-2013, on the whole, and particularly in Timiş County, is supported by important financial resources allocated from the common budget and from the national budget.

During the sixteenth sessions of projects organized until the end of 2009, in Timiş, a total number of 469 concordant projects were applied, afferent to nine measures, of which 310 projects were declared to be eligible, 4 not eligible, 178 projects accumulated the necessary points, being selected for financing, in 170 projects the financing contract was signed and 26 projects were completed.

Of the total number of concordant projects applied at the level of the development region V-Vest, 31% were applied in Timiş County, the other countries representing a smaller percentage of projects, respectively 24% in Caraş-Severin, 23% in Arad and 22% in Hunedoara County.

Keywords: EAFRD, pillar II, rural development, public funds, projects

Abstract

The current situation of the most Romanian holdings does not allow the performance of a high-quality and competitive agricultural production on the internal market and on the external market as well and the provision of a decent standard of living for farmers. The overtaking of this situation supposes the conversion of the country-like family holdings into modern trading family holdings, able to induce technological progress and to valorise the natural, labour and material resources available in our country.

The activity content for the formation of such holdings is represented by the enhancement of their economic capacity and of their competitional power, in concordance with the requirements of future agriculture and of Romania's integration in the EU structures. The accomplishment of such an objective implies actions and measures of agricultural policy, correlated to each other and sustainable, which should combine the private economic interest with the national one.

Keywords: holdings, economic size (European Size Unit – ESU), production, competitivity, productivity