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ABSTRACTS

BIOLOGY

TI: SELECTED ASPECTS OF BIOLOGICAL CONDITION IN PRESENCE OF MARITAL STATUS OF MALES

AU: Borysławski K., Stankowska M.

AD: Department of Anthropology, Institute of Biology, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: Numerous studies indicate relationships between biological condition and marital status. Many inquiries show that within every age range the worst biological condition is held by single men, while the best is held by married men. In order to explain this phenomenon, two hypotheses have been formulated. The first concerns so-called the health selection hypothesis, which assumes that people of worse health condition, both physical and psychological, are single more often. The second assumes the social causation hypothesis through assurance of mutual care and support. The aim of the paper is an attempt to evaluate and possibly verify two hypotheses presented above on the basis of comparison of four categories of men's marital status; that is, married, divorced, being in a stable informal relationship (cohabitation), and singles (never get married and never be in a stable informal relationship). Men being in informal relationships deserve here special attention. Previous studies dedicated to those relationships were conducted taking only their social dimension into account; and existing anthropological studies concern only married men and bachelors. The material is data from a questionnaire carried out in 2007 among 309 males, and that concerned height and mass of the body, body mass index, as well as, the occurrence of sight defects up to 25 years old. The essential relationships between marital status and biological condition of men have been observed. The least height of a body is observed among married men, the greatest height is observed among singles and those being in informal relationships. Mass of a body is the most considerable among divorced men, the least among married men and those being in informal relationships, and that could prove the hypothesis of health selection right. The least value of body mass index is held by men in informal relationships, the greatest – divorced men. This difference is statistically relevant. The analyzed singles, as the only ones among considered marital status' categories, have sight defects before turning 25 years old, and that proves the theory of health selection hypothesis right.

DE: marital status, body mass index, biological condition of men, sight defects

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 11–20.

TI: ARTHROPODS (ACARI, ANOPLURA, SIPHONAPTERA) OF SMALL MAMMALS OF LUBELSKIE PROVINCE

AU: Haitlinger R.

AD: Institute of Biology, Department of Systematics and Ecology of Invertebrates, Wrocław University of Environmental and Life Sciences

LA: English

AB: 1203 arthropods belonging to 83 species were obtained from 579 small mammals of 18 species of Lubelskie province. Total, 214 Siphonaptera of 12 species, 81 Anoplura of 7 species and 905 Acari of 64 species were found. Moreover, in literature were mentioned 9 other species of Siphonaptera, 3 of Anoplura and 18 of Acari. Total in Lubelskie province stated 123 arthropod species: 21 of Siphonaptera, 10 of Anoplura and 82 of Acari. *Ctenophthalmus orientalis*, *Polyplax reclinata*, *Linognathoides schozodactylus*, *Enderleinellus propinquus*, *Echinonyssus sciurinus*, *E. criceti*, *Ameroseius lanatus*, *Crocidurobia michaeli*, *Lophioglyphus liciosus* and *Dermacarus sciurinus* are very rare species in Poland. Most arthropod species were collected from *Myodes glareolus* (39) and *Apodemus agrarius* (35).

DE: Acari, Anoplura, Siphonaptera, small mammals, Lubelskie province, faunistic

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 21–48.

TI: NEW RECORDS OF MITES (ACARI: PROSTIGMATA: CALYPTOSTOMATIDAE, ERYTHRAEIDAE, JOHNSTONIANIIDAE, MICROTROMBIDIIDAE, PODOTHROMBIIDAE, TROMBIDIIDAE) FROM ESTONIA, LATVIA AND LITHUANIA

AU: Haitlinger R.

AD: Institute of Biology, Department of Systematics and Ecology of Invertebrates, Wrocław University of Environmental and Life Sciences

LA: English

AB: *Abrolophus norvegicus* (Thor), *Hauptmannia wratislaviensis* Haitlinger, *Leptus* (*Leptus*) *mariae* Haitlinger, *L. (L.) molochinus* (C. L. Koch), *L. (L.) miromiri* Haitlinger, *Erythraeus* (*Erythraeus*) *kuyperi* (Oudemans), *Allothrombium fuliginosum* (Hermann), *Trombidium holosericeum* (Linnaeus), *Podothrombium roari* Haitlinger and *Campylothrombium tomiri* Haitlinger are new for Estonia; *A. norvegicus*, *H. wratislaviensis*, *Charletonia cardinalis* (Pallas), *L. (L.) mariae*, *E. (E.) kuyperi*, *Balaustium kacperi* Haitlinger, *P. roari* and *Johnstoniana eximia* (Berlese) are new for Latvia and *C. cardinalis*, *E. (E.) kuyperi*, *A. fuliginosum* and *Calyptostoma velutinus* (Müller) are new for Lithuania.

DE: Acari, Calyptostomatidae, Erythraeidae, Johnstoniidae, Microtrombidiidae, Podothrombiidae, Trombidiidae, new records, faunistic

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 49–55.

TI: *PSEUDOPARAPHAGELLA GERARDI* GEN. N., SP. N. (ACARI: ASTIGMATA: CANESTRINIIDAE) FROM GUINEA

AU: Haitlinger R.

AD: Institute of Biology, Department of Systematics and Ecology of Invertebrates, Wrocław University of Environmental and Life Sciences

LA: English

AB: *Pseudoparaphagella gerardi* gen. n., sp. n. collected from *Caelorrhina thoreyi* Schaum (Coleoptera: Scarabaeidae: Cetoniinae) is described from Guinea.

DE: Acari, Canestriniidae, new genus, new species, Guinea
SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 57–61.

TI: BREEDING AVIFAUNA OF KORFANTÓW TOWN, OPOLE SILESIA

AU: Kopij G.

AD: Department of Vertebrate Ecology and Paleontology, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The study area comprised a small town (surface – 80 ha; 1 980 inhabitants) situated in the Silesian Lowland. From April to July 2005, quantitative studies on birds breeding in the town were conducted by means of a simplified version of the mapping method (four counts). A total of 59 breeding bird species were recorded. The group of dominant species included *Passer domesticus*, *Delichon urbica*, *Hirundo rustica*, *Apus apus*, *Sturnus vulgaris* and *Streptopelia decaocto*. They comprised together 66, 3% of all breeding birds. The group of subdominants was formed by *Carduelis cannabina*, *Carduelis chloris*, *Serinus serinus* and *Phoenicurus ochruros* (together 10,0%). During the years 2001–2005 the following species were recorded for the first time as breeding in Korfantów: *Coturnix coturnix*, *Vanellus vanellus*, *Picus canus*, *Dendrocopos minor*, *Motacilla flava*, *Muscicapa striata*, *Ficedula albicollis* and *Saxicola torquata*. In 2005, the following species, which nested in the past, were not recorded: *Ciconia ciconia*, *Asio otus*, *Picus viridis*, *Riparia riparia*, *Motacilla cinerea* and a few species of waterbirds. In comparison with the years 1985–2000, *Pica pica* and *Corvus monedula* have decreased in numbers.

DE: urban ornithology, synurbanization, censuses, population trends

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 63–79.

TI: BREEDING BIRD COMMUNITY OF PARK POŁUDNIOWY IN WROCŁAW

AU: Kopij G.

AD: Institute of Natural Sciences, Department of Vertebrate Ecology and Paleontology, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: English style, with large number of tree and shrub species, with limes and oaks as dominant species. The shrub and herb layer is however rather poor. In 2009, the mapping method has been employed to quantify the breeding bird community in the whole area. In total 36 bird species has been recorded. *Sturnus vulgaris* and *Columba palumbus* formed the group of eudominants (together 27,7% of all breeding pairs); *Parus caeruleus*, *Parus major*, *Turdus merula*, *Turdus pilaris*, *Passer montanus* and *Carduelis chloris* were in the group of dominants (together 43%). In comparison with 1990–1999 the following species were not recorded in 2009: *Strix aluco*, *Fulica atra* and *Picus canus*. On the other hand, in comparison with 2009 *Corvus monedula* was not recorded during the years 1990–1999. In the last 10 years *Turdus pilaris* has rapidly increased. A slight increase is also noticeable for *Phoenicurus phoenicurus* and *Corvus cornix*, while a decrease for *Luscinia megarhynchos*.

DE: bird communities, censuses, urban ornithology

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 81–85.

TI: EFFECT OF PROTECTION LEVEL AND NITROGEN FERTILIZATION ON AMINO ACIDIC CONTENT IN SPRING BARLEY CORN

AU: Zbroszczyk Z.¹, Nowak W.², Jama A.²

AD: ¹ Department of Plant Nutrition, Wrocław University of Environmental and Life Sciences

² Department of Crop Production, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: Three series of field experiments were carried out over the years 2001–2003. Effects of plant protection level and diversified nitrogen fertilization applied on amino acid composition of three spring barley fodder cultivars were tested in the study. An influence of the basic and full levels of plant protection as well as diversified nitrogen fertilization (40, 80 i 120 kg N·ha⁻¹) on exo- and endogenous amino acids concentration was also compared. One non husked cultivar of spring barley (Rastic) and two husked cultivars (Bryl and Refren) were the test plants. The plant protection level and nitrogen fertilization applied exerted a significant effect on some amino acids concentration in barley grain. No statistically important influence of the cultivars under study on amino acid composition of spring barley protein was proved.

DE: spring barley, amino acids content, nitrogen fertilization, plant protection level

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 87–97.

BIOLOGY

TI: AN ASSESSMENT OF SEXUAL ACTIVITY OF POLISH MERINO RAMS IN CONTROLLED SYSTEM OF HAND SERVICE RESPECTING THEIR AGE

AU: Bodkowski R., Patkowska-Sokoła B., Chudoba K., Janczak M.

AD: Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: A sexual activity of Polish Merino rams in a range of the time of preparation for the first mount, number of mounts and the length of copulation was assessed during tupping led in system of "hand service".

Basing on the measurements conducted it was observed that 2-years old rams (first reproduction season) needed considerably more time for the first mount on an ewe as compared to older rams (already used for the reproduction). Younger rams were characterized in turn by higher sexual drive that was manifested in larger number of mounts. No influence of rams age on the time of copulation was observed.

Basing on the results obtained it should be concluded that the sexual activity of rams is significantly influenced by the age and gained sexual experience.

DE: Polish Merino rams, system of "hand service", sexual activity

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 99–106.

TI: AN ASSESSMENT OF FATS OF PLANT AND ANIMAL ORIGIN IN RELATION TO THEIR ATHEROGENIC AND THROMBOGENIC INDICES

AU: Bodkowski R.¹, Patkowska-Sokoła B.¹, Walisiewicz-Niedbalska W.²

AU: ¹ Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

² Industrial of Chemistry Research Institute, Warsaw

LA: English

AB: The aim of the study was to assess fats of plant and animal origin in relation to their possible influence on a development of atherosclerotic changes in blood vessels.

It was found on the basis of chromatographic analysis that plant fats, as compared to animal ones, were characterised by lower content of saturated fatty acids to which an atherogenic (C12:0, C14:0, C16:0) and thrombogenic (C14:0, C16:0, C18:0) activities are attributed, and by higher content of monounsaturated and polyunsaturated ω -6 fatty acids of an anti-atherosclerotic activity. The values of calculated atherogenic and thrombogenic indices were also lower for plant fats, and they ranged from 0.05 to 0.14, and 0.13 to 1.83, respectively, as compared to animal fats, in which the indices were on the level of 0.21 to 1.63, and 0.16 to 17.86, respectively.

DE: plant and animal fats, atherogenic index, thrombogenic index

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 107–114.

TI: PARASITES INVASIONS OF HORSES FROM SELECTED STABLES LOCATED OF LOWER SILESIA REGION

AU: Geringer de Oedenberg H., Śpiewak J., Jagła E., Budzińska M.

AD: Department of Horse Breeding and Riding, Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The research was conducted in three stables located of Lower Silesia region. There were compared different breeding system: A – indoor housing, B1 – combined – outdoor/indoor system and B2 and C – outdoor housing. 180 faecal samples were analysed, as a result the following parasites were detected: *Strongyloides westerii*, *Parascaris equorum*, Strongylidae, *Anoplocephala* spp. The general prevalence was 60,2% with the average number of eggs per sample being $348,2 \pm 239,3$ (range: 50-1150). Prevalence of the disease spreading in different stables showed statistical variety ($\chi^2=31,11$; $df=3$; $p=0,000$).

DE: horses, parasites

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 115–123.

TI: EFFECT OF THE LEVEL OF *VARROA DESTRUCTOR* INVASION ON HONEY PRODUCTION AND MEAN BODY MASS OF SINGLE BEE IN BEE COLONY PREPARED FOR WINTERING

AU: Howis M., Nowakowski P.

AD: Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The aim of the study was to determine the effect of the level of parasite invasion of *Varroa destructor* on honey production level, and on the average weight of a single bee in the colony prepared for wintering. The study was conducted in one apiary in the period from June 2008 to April 2009 on 12 colonies. Honey production ranged from 8.4 to 39.2 kg between colonies. The application of anti-parasite treatment in September and October period resulted in removal from 661 to 6 694 mites per colony. In early December, the average weight of a single bee was from 109 to 146 mg. There was no significant relation found between single bee weight and the *Varroa destructor* population removed in late autumn. Colonies with low parasite infestation during winter characterised with larger area of brood ($r = -0.63$) and larger volume of the nest ($r = -0.74$) in the early spring of the next year.

DE: *Varroa destructor*, bee colony, honey, weight of single bee

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 125–130.

TI: INFLUENCE OF INCREASED LEVEL OF METHIONINE IN THE DIETS ON THE GROWTH, RESORPTION RATE OF YOLK SAC RESIDUES AND POST-HATCH INTESTINE DEVELOPMENT IN CHICKENS

AU: Jamroz D.¹, Tomasz Wertelecki T.¹, Andreas Lemme A.², Janusz Kubizna J.¹, Agnieszka Gajda-Janiak A.¹

AD: ¹ Department of Animal Nutrition and Feed Quality, Wrocław University of Environmental and Life Sciences

² Degussa, Feed Additives, Hanau, Germany

LA: English

AB: Supplementation of the diets with DL-methionine (MET) at a dose of 0.3; 0.7; 1.2 and 1.8 g kg⁻¹ influenced the body weight gain of chickens just from 5th day of life. On day 14 the BW was higher in experimental groups as compared to control (by 5.7; 9.2; 22.4 and 24.4%, respectively). From day 5th significantly (P<0.05) greater feed consumption was observed in chickens fed diet containing 4.2 or 4.8 g/kg of dietary MET. In chickens fed diets with greatest supplements of DL-MET the duodenum length calculated to 100 g BW^{0.67} was significantly (P<0.01; <0.05) smaller as compared to other groups. The dynamic of yolk sac (YS) residues disappearance during first 7 days post hatch was regular, without remarkable alterations depending on MET level. The deeper absorption of protein from YS was observed only in chickens fed diets with higher doses of MET. Amino acids profile of yolk sac protein (lysine as 100%) calculated on the basis of amino acids disappearance from YS has been diversified depending on both MET level in diets and age of chickens. From day 5. of life the tendency of decreasing of methionine to lysine ratio in yolk sac protein was observed in chickens fed diets with highest dose of DL-MET.

DE: broilers, methionine, yolk sac resorption, development

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579, 131–150.

TI: AN ASSESSMENT OF PROFITABILITY OF FOX SKINS PRODUCTION WHEN FEEDING WITH TRADITIONAL WET FODDER AND COMPLETE GRANU-LATE

AU: Janczak M., Bodkowski R., Chudoba K.

AD: Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: English

AB: The aim of the study was an assessment of an economic profitability of the production of fox skins using various feeding system. The research material were 80 polar foxes divided into two groups (40 individuals in each) and fed with traditional system, i.e. with wet fodder prepared on the farm, and with ready complete granulate.

An application of granulate, as compared to the traditional fodder, decreased total production costs of 20%, with 22,5% decrease in fodders costs, 45.5% labour costs, 66.6% costs of exploitation of capital essets and 17,6% material expenses. In the case of feeding with granulate, the indices of cost-effectiveness and profitability were 139.5 and 39.5%, respectively, while net profit obtained from skin was about 58 PLN. In traditional system in turn, that indices were 101 and 1.52%, while net profit for skin was 2.7 PLN.

DE: polar foxes, traditional feed (wet) and complete granulate, production effectiveness, indices of cost-effectiveness and profitability

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 151–159.

TI: THE MODEL STUDY OF AN ECONOMIC EFFECTIVENESS OF FOX SKINS PRODUCTION – MODEL OF ONE THOUSAND OF HEADS

AU: Janczak M., Bodkowski R., Knecht D.

AD: Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: English

AB: The aim of the study was to construct models for polar fox farms manufacturing thousand of skins per year taking into consideration various feeding systems and different skins prices. In the case of traditional model (I), i.e. using traditional wet fodder, the profit forecasted would be 2 750 PLN, and an economic cost-effectiveness of the production would be saddled with a high investment risk and low profitability on the level of about 1.5%. In turn, models based on modern feeding systems (II–V), i.e. based on ready complete granulates may be assessed as safe ones and lower costs of production guarantee considerably higher profit from 39 180 to 88 820 PLN, with cost-effectiveness index from 127 to 167%.

DE: polar fox, various feeding systems, cost-effectiveness and profitability indices

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 161–169.

TI: ASSESSMENT OF THE HORSES' BEHAVIOUR FOR RACING PERFORMANCE ON THE WROCLAW PARTYNICE RACECOURSE IN THE 2006–2009 SEASONS DURING THE START

AU: Kamińska K., Geringer de Oedenberg H.

AD: Department of Horse Breeding and Riding, Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The most stressful activity for the racehorses before the start is coming into a starting machine.

The purpose of the study was to specify and evaluate horses' behaviour into a starting machine. 529 horses were evaluated on a scale of 1 to 4 on the Wrocław Partynice Racecourse in the 2006–2009 seasons.

Differences in the mean marks of horses' behaviour into a starting machine dependent on the breeder. Negative highly significant correlation between success coefficient and the mean marks of horses' behaviour into a starting machine was indicated. It means that some of the nervous excitability is necessary for racehorses.

DE: behaviour, racehorses, starting machine

sO; Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 171–176.

TI: LACTOFERRIN AN ANTIMICROBIAL PROTEIN OF BOVINE MILK: A REVIEW

AU: Kolkman H.¹, Zielak-Steciwko A.², Nowakowski P.²

AD: ¹ Department of Animal Science, Wageningen University

² University of Environmental and Life Sciences Instytut Hodowli Zwierząt, Uniwersytet Przyrodniczy we Wrocławiu

LA: English

AB: Growing interest in mastitis prevention by means of natural resistance of cows can be observed in the dairy sector nowadays. This review focuses on the antimicrobial protein lactoferrin, present in normal bovine milk and during mastitis. Lactoferrin, a natural 80-kDa iron binding glycoprotein is known to inhibit the growth of different microbes. Current knowledge of the antimicrobial mechanism of lactoferrin in milk and factors influencing its

concentration are being discussed. This review will not only focus on the mechanisms which are involved in the inhibiting effect but also differences in lactoferrin levels due to milk yield, lactation stage, cows' age, parity and cattle breed. Although the precise biological function of lactoferrin is still not clear, results suggest that it might be a useful tool in determining resistance to intramammary infections and health status of the udder of dairy cows.

DE: cattle, mastitis, milk, lactoferrin

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 177–185.

TI: A SURVEY OF CEREAL GRAINS CONTAMINATION WITH FUNGAL MICROFLORA IN SOUTH WESTERN AND WESTERN REGION OF POLAND

AU: Kubizna J., Jamroz D.

AD: Departament of Animal Nutrition and Feed Quality, Wrocław University of Environmental and Life Sciences

LA: English

AB: Paper deals with the contamination of the cereal grains with fungal microflora. investigations were carried out on the basis of data received from the Regional Laboratories for Veterinary Hygiene in Wrocław and Opole and were related to the years 2003–2007. In total, 399 samples of grains were elaborated. In the paper the average counts of fungal microflora counted to the \log_{10} cfu g^{-1} value were presented. The results of micological examinations indicate that the majority of analysed samples was characterized by the proper mycological quality established by the EU Regulations and by the Polish standard. However, disturbing could be fact that in almost 45% of samples this contamination was observed in relatively high concentrations. Obtained results confirm the opinion that in the Polish conditions the average count of the mycoflora in the fresh grains usually does not exceed 104 cfu g^{-1} and that the micological quality of grains is comparable with the grains harvested in other European countries.

DE: cereal grains, micoflora, contamination

SO : Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 187–198.

TI: A SURVEY OF CEREAL GRAINS CONTAMINATION WITH MYCOTOXIN IN SOUTH WESTERN AND WESTERN REGION OF POLAND

AU: Kubizna J.¹, Jamroz D.¹, Petryna M.²

AD: ¹ Departament of Animal Nutrition and Feed Quality, Wrocław University of Environmental and Life Sciences

² Regional Laboratory for Veterinary Hygiene, Poznań

LA: English

AB: Paper deals with the contamination of the grains of wheat, barley, maize, oats, rye and triticale with mycotoxins (aflatoxins, ochratoxins, zearalenone, deoxynivalenol and fumisinisins). The investigations were carried out on the basis of data received from the Regional Laboratories for Veterinary Hygiene in Poznań, Wrocław and Opole and were related to the years 2003–2007. In total 1 247 samples were examined. The most analyzed samples were the maize grains and there the highest number of positive observations were obtained (40.6% of examined samples). Similar parameters were obtained for the wheat grains (positive results in 42.6% of examined samples). In remaining cases the percentage of positive observations did not exceed 25% of examined samples. In the majority of cases the predominant mycotoxin was the OTA then ZEA and DON. Zearalenone predominated on

maize grain (51% of positive observations); deoxynivalenol and OTA were dominating on the rye (both 33.3% of positive observations). The highest percentages of AFBn were observed in the grain of maize, triticale and rye (12–16% of positive tests). Obtained results confirm the opinion that in the Polish conditions approx. 20% of grains intended for feeding of animals or as human' food is contaminated with mycotoxins on the level above the limit of the estimation.

DE: mycotoxins, cereal grains, contamination

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 199–213.

TI: SOME FACTORS OF DAIRY COWS AND CALVES HUSBANDRY, MAINTENANCE AND FEEDING INFLUENCING THEIR HEALTH STATUS AND WELFARE

AU: Kuczaj M.¹, Preś J.², Kinal S.², Nicpoń J.³, Łuczak W.², Zielak-Steciwko A.¹

AD: ¹ Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

² Department of Animal Nutrition and Feed Quality, Wrocław University of Environmental and Life Sciences

³ Department of Internal Diseases with Clinic for Horses, Dogs and Cats, University of Environmental and Life Sciences

LA: Polish

AB: The aim of the paper was an analysis of some factors of dairy cows and calves husbandry, maintenance and feeding, that influence their health status and welfare. The zootechnical selection lead to an increase in body mass, daily gains and also to increased milk and slaughter yield in changed maintenance and feeding conditions. The features like fertility, performance period length, lack of immunity on unfavourable environmental conditions and susceptibility on some diseases were concurrently the subject to deterioration. The maintenance of production results obtained requires an application of more and more complicated methods of nursing, feeding and maintenance of animals, including also new systems of calves feeding, close to natural conditions. Utilisation of cows in conditions close to natural ones is one of the welfare rules: grazing, natural fodders, deep litter cow sheds, yards. However, due to organisational and economical reasons, it may be sometimes the controversial issue, but is worth to consider having in mind an improvement in functional features of cattle.

DE: cows, calves, welfare, diseases, feeding and maintenance system of cattle

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 215–228.

TI: THE COWS PREFERENCES OF AN INTAKE OF FODDERS CONTAINING FISH OIL AND FLAVOUR ADDITIVES

AU: Kupczyński R.¹, Janeczek W.¹, Kinal S.²

AD: ¹ Department of Environmental Hygiene and Animal Welfare, Wrocław University of Environmental and Life Sciences

² Department of Animal Nutrition and Feed Quality, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The purpose of the study was to determine the cows preferences of the consumption of fodder supplemented with cod liver oil with an aromatic addition of a flavour of molasses, melon, orange or onion. The test aimed at an assessment of gustatory preferences of additives used in a complete mixture for cows. The study included 14 cows of Polish Holstein-Friesian breed. Cod liver oil and 4 flavours (12.5 ml of flavour in 1 litre of oil)

were used in the study. The rate of fodder intake in a period of 3 minutes was estimated. Among all flavours assessed, the cows consumed the highest intake ($P < 0,01$) of fodder with fish oil with an addition of molasses flavour. The rank of preferences of fodder intake for other flavour additives was as follows: onion, melon and orange. The short-term study conducted should be treated as preliminary one, that needs a verification in a typical nutritional experiment.

DE: cows, fish oil, flavor

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 229–235.

TI: SOME BIOCHEMICAL BLOOD INDICES OF SPORT HORSES IN THE PHASE OF THE TRAINING CYCLE

AU: Neuberg-Zuchowicz K., Geringer de Oedenberg H.

AD: Institute of Animal Breeding, Department of Horse Breeding and Horse Riding Wrocław University of Environmental and Life Sciences

LA: Polish

AB: Evaluation of sport horse's efficiency and get ready to exertion are most important things of training. The aim of study was designation blood indices in the phase of training cycle. The material was 8 Noble Half-Bred horses, trained to show jumping competitions. The blood samples were taken three times in the year: first examination was on the beginning competition's season (11th of April 2005), second in the middle competition's season (29th of June 2005) and third after one month resting (23th of November 2005). The blood samples were taken in the morning and after training in the same day. In the plasma designed parameters: total protein, glucose, CK, Na⁺, Cl⁻, K⁺. T- test were used for designation differences between rest and exertion parameters. ANOVA were used for three examinations. Research showed that phase of the training cycle influence on some blood indices. Differences statistically significant were noted in electrolyte like K⁺, Cl⁻.

DE: sport horses, biochemical blood indices

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 237–243.

TI: DIFFERENTIATION IN CONFORMATION OF POLISH KONIK HORSES FROM TWO BREEDING CENTERS IN POLAND

AU: Pasicka E., Geringer de Oedenberg H.

AD: Institute of Horse Breeding, Department of Horse Breeding and Horse Riding, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The aim of the study was the conformation characteristic of Polish Konik horses from two breeding centers in Poland. 37 horses were analyzed, including males (stallions and geldings) and females. The youngest horses were over 3 years old, being in the final stage of morphological bone gain.

The horses were divided into age ranges. In each Popielno and in Roztocze National Park one group of male specimens aging 3 to 9 years was set up. In turn, females were listed in four groups, two in each of the studied facilities. In Roztocze National Park and in Popielno younger females were qualified into 3 to 5 year old group, older to 6 to 9 year old group.

T-Student test used in the experiment showed in studied males statistically highly significant differences in the average values of indices of head's length, chest circumference and force between the studied centers. In turn, one-way analysis of variance and Fisher's exact test (NIR) showed statistically highly significant differences in the average values of chest

circumference and force between younger females group from Popielno and two females groups from Roztocze National Park, and between older females group from Popielno and younger females group from Roztocze National Park. Statistically highly significant differences were noticed between groups of older females from Popielno and Roztocze National Park. Mean values of oblique trunk length (larger) and depth-width chest indices turned out to be highly significantly different between older female groups from Popielno and Roztocze National Park, and significantly statistical different between a group of older females from Popielno and younger females group from Roztocze National Park. Mean values of overbuilt indices were statistically highly significantly different between the younger females groups from both of the studied facilities, and significant statistic differences were demonstrated between the younger group of females from Roztocze National Park and the groups of older females from both verified centers. Based on the indices analyzed, determined was similarity of the studied Polish Konik horses to different utilitarian types, with predominance of comprehensive utilitarian (combined). Furthermore, research of the Polish Konik horses body dimentions, expressed by indices, highlighted in their exterior some features typical for noble horses, as well as extremely different features, characteristic for cold-blooded horses.

DE: Polish Konik horses, exterior, morphometrical measurements, indices

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 245–257

TI: PROSPECTS FOR THE DEVELOPMENT OF ŻŁOTNICKA SPOTTED PIGS IN POLAND AS PART OF THE PROTECION OF GENETIC RESOURCES

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LA: English

AB: Many pig breeds worldwide are threatened with extinction, which is especially evident in Europe. An action which is to change this situation is protection *in situ*. In Poland it covers three pig breeds, including Żłotnicka Spotted.

This study presents the general characteristic of this breed and prospects for development of this native pig population. At present it comprises 580 sows of the foundation stock and this number is consistently growing. Maintenance of such a trend in a longer perspective will be possible thanks to the utilization of subsidies from the state budget, increasing profitability of production of slaughter animals and their utilization as a material for the production of superior quality products, as well as a wider use of this breed in the production of organic food. Thanks to the integration of these actions the Żłotnicka Spotted breed may take a rank it deserves among populations of pigs kept in Poland.

DE: pigs, native breeds, fattening and slaughter performance, żłotnicka spotted

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2010, LXI, 579: 259–266.

TI: THE RELATIONSHIP BETWEEN CHOLESTEROL CONTENT IN MILK AND BLOOD OF COWS OF DOMESTIC BLACK AND WHITE BREED GRADED WITH HF CATTLE

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LA: English

AB: The subject of the study was an analysis of cholesterol content in milk and blood serum of domestic black-white cattle of an average yield of milk, fat and protein, graded with hf cattle. The study included 139 cows characterised by various contribution of hf genes ($\leq 25\%$, 25–50%, 50–75%, $\geq 75\%$) and yield of milk, fat and protein in milk on an average level of 4758.3 kg of milk, 196.39 kg of fat and 158.91 kg of protein with mean fat content in milk on the level of 4.14% and protein of 3.34%. High positive correlations between an increasing contribution of hf genes in the genotype of black-white cattle and cholesterol content in milk in 305-days lactation ($r=0.877$), cholesterol content in 100 g of milk ($r=0.956$), and also in milk fat ($r=0.842$) were observed.

DE: cholesterol, cattle, milk, blood serum

SO: Zesz. Nauk. UP Wroc., Biol. Hod., Zwierz. 2010, LXI, 579: 267–274.