



**Zeszyty Naukowe
Uniwersytetu Przyrodniczego we Wrocławiu
BIOLOGIA I HODOWLA ZWIERZĄT, 2008, LVI, 566**



ISSN 1897-208X
ISSN 1897-8223

ABSTRACTS

TI: OBSERVATIONS OF TUPPING BEHAVIOUR OF POLISH MERINO BREED SHEEP IN CONTROLLED IN-HAND MATING SERVICE

AU: Bodkowski R., Patkowska-Sokoła B., Chudoba K., Iwańska E., Zygadlik K.

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LA: Polish

AB: The aim of the present study was an assessment of sexual behaviour of rams and ewes of Polish Merino breed in a range of sexual reactions during tupping running by controlled in-hand mating system. Five types of sexual reactions, i.e. sniffing at, flehmen, pulling out a tongue, nudging with a leg and plucking of ewes' wool, were observed in rams behaviour. All forms of sexual reactions were observed in older as well as younger rams, but in the case of younger rams (used for mating for the first time) they were often in an incomplete scale. In turn, in ewes behaviour seven types of sexual reactions characteristic for that period were observed, i.e. searching for a ram, sniffing at ram's testes, rubbing against a ram, nudging of a ram, squatting, bending of a back and running away. Older ewes fully exposed a sexual behaviour towards a ram, while younger ones (used for reproduction for the first time) often exhibited a lack of active interest in a ram and a low receptivity, that was probably a result of a lack of sexual experience.

DE: sexual behaviour, ewes and rams of Polish Merino breed, controlled mating system

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 7-16.

TI: SMALL MAMMALS (MAMMALIA: INSECTIVORA ET RODENTIA) OF RACIBÓRZ AND VICINITY (SOUTH POLAND)

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LA: Polish

AB: The aim of the present work was to fill out some gaps in the knowledge of Micromammalia of Racibórz Basin (South Poland). This area is one of the most poorly studied as far as mammals of Poland are concerned. Until now, 18 species of small mammals were recorded, including six species recorded for the first time in the present work. The species of mammals were identified basing on the remains found in the pellets collected in church towers for the project „The role of sacral buildings in conservation of the barn owl *Tyto alba*”. There were 197 pellets collected at three localities: Pietrowice Wielkie, Łubowice, and Racibórz, in 2000. Remains of 485 vertebrate individuals were found in the collected pellets. Of these 98.8% were mammal prey and 1.2% were birds. Among mammals 13 species were identified. Common vole *Microtus arvalis* predominated among mammalian prey.

DE: Micromammalia, barn owl, *Tyto alba*, pellets, faunistics, Racibórz Basin

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 17-24.

TI: COMPARISON OF MILK PERFORMANCE OF POLISH HOLSTEIN-FRIESIAN COWS DEPENDING ON THE MANAGEMENT SYSTEM

AU: Czerniawska-Piątkowska E., Szewczuk M., Snopkowska M.

AD: Department of Ruminant Science, Agricultural University of Szczecin

LA: Polish

AB: The aim of the studies was to compare milk performance of Polish HF of the Black-and-White variety cows managed under different housing systems. We have analysed two farms, A and B. The cows on the farm A were managed in a free-stall system on a deep bedding, while those on the farm B were managed in confinement. The studies allowed concluding that the cows managed in the free-stall system achieved better life performance for milk (6788.2 kg), FCM (7712.2 kg), fat (334.5 kg), protein (226.5 kg), as well as percentage content of fat (4.88%) and protein (3.34%), as compared to those housed in confinement. The differences were significant at $p \leq 0.05$ and $p \leq$

0.01. The cows housed free were characterised by easier calvings and their calves were of stronger vitality compared to those housed in confinement.

DE: cows, phf, milk, management system, yield, fertility

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 25–34.

TI: PLACENTA MASS AND PRODUCTIVE RESULTS OF POLISH LANDRACE BREED SOWS, UTILIZED TRADITIONALLY AND IN INDUSTRIAL FARM

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² POL-FERM Sp. z o.o. Łosice

LA: Polish

AB: The research was carried out on P.L. sows reared and used for reproduction in two different types of rearing facilities, namely a traditional piggery and an industrial farm. The aim of the research was to determine how rearing conditions affect body and placenta weights after delivery and how these conditions affect litter size and weight on 1 and 21 day of lactation. The experiment comprised 56 sows, 28 of which in a traditional piggery and 28 in an industrial farm.

It was found out that the rearing conditions significantly affected body weights before and after delivery in primiparous sows and multigravida sows. The multigravida sows produced the heaviest placenta (4,27 kg) which were different from multigravida sows from traditional pigsty by 3,57 kg and from primiparous sows from both rearing systems. The mean placenta weight from element sows from traditional pigsty was 3,01 kg, and industrial farm 3,16 kg. Differences statistically significant and highly significant were determined for the means. The calculated values of some correlation coefficients suggest that placenta weight may affect litter size and body weight of piglets born and reared till 3 week of life.

DE: Polish Landrace sows, placenta weight, piglet production results

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 35–43.

TI: *LASIOERYTHRAEUS CARDONENSIS* SP.N., A NEW LARVAL MITE FROM VENEZUELA (*ACARI: PROSTIGMATA: ERYTHRAEIDAE*)

AU: Haitlinger R.

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

LA: English

AB: *Lasioerythraeus cardonensis* sp.n., a new larval erythraeid is described from Venezuela.

DE: taxonomy, new species, *Acari*, *Prostigmata*, *Erythraeidae*, *Lasioerythraeus*, Venezuela

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 45–49.

TI: NEW RECORDS OF MITES (*ACARI: PROSTIGMATA: ERYTHRAEIDAE, JOHNSTONIANIDAE, TROMBIDIIDAE*) FROM WEST AND NORTH EUROPE, WITH THE DESCRIPTION OF *ABROLPHUS NYMINDEGABICUS* SP.N.

AU: Haitlinger R.

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

LA: English

AB: *Hauptmannia wratislaviensis* is a new species to the fauna of Denmark, Luxembourg and Sweden, *Abrolophus noirvegicus* to Belgium and Denmark, *Erythraeus (E.) kuyperi* to Denmark, *E. (E.) jowitae* to Belgium and Sweden, *Leptus (L.) trimaculatus* to Luxembourg and Sweden, *L. (L.) ignotus* to f Denmark and Luxembourg, *L. (L.) mariae* to f Luxembourg and Swedfen, *Balaustium nikae* to Sweden, *Diplothrombium rackae* to Denmark, *Trombidium holosericeum* to Denmark and Luxembourg, *T. brevimanum* to Denmark, *Allothrombium fuliginosum* to f Belgium and Luxembourg and *Podothrombium filipes* to Denmark. *Abrolophus nymindegabicus* sp.n. is described from Denmark and Sweden.

DE: *Acari*, *Prostigmata*, *Erythraeidae*, *Johnstonianidae*, *Trombidiidae*, new records, new species, .Belgium, Denmark, Germany, Holland, Luxembourg, Sweden

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 51–64.

TI: TWO NEW SPECIES OF MITES (*ACARI: ASTIGMATA: CANESTRINIIDAE*) FROM BRAZIL AND PERU

AU: Haitlinger R.

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

LA: English

AB: A new genus *Peruthiana* and two new species: *Dorynothiana delmari* from Brazil and *Peruthiana brianna* from Peru, are described and illustrated.
DE: *Acari, Canestriniidae*, new species, new genus, Brazil, Peru
SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 65–71.

TI: *CHARLETONIA BEHBAHANENSIS* SP.N. AND *C. BOJNORDENSIS*. SP.N. FROM IRAN (*ACARI: PROSTIGMATA: ERYTHRAEIDAE*)

AU: Haitlinger R.¹, Saboori A.²

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² Department of Plant Protection, College of Agriculture, Tehran University, Karaj, Iran

LA: English

AB: *Charletonia behbahanensis* sp.n. and *C. bojnordensis* sp.n., larval erythraeids, are described from Iran.

DE: acarology, taxonomy, new species, *Acari, Prostigmata, Erythraeidae, Charletonia*, Iran

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 73–80.

TI: THE COMPARISON OF SEMEN OF CALIFORNIAN AND NEW ZEALAND BREED RABBITS

AU: Janczak M., Kowalczyk A., Grondowska A.

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

LA: English

AB: Research material were ejaculates collected from 10 rabbits – 5 New Zealand white rabbits and 5 Californian rabbits. The semen was collected with the use of an artificial vagina. Only liquid fraction of the semen was subject to research. With 66 collections on Californian rabbits and 47 on New Zealand white rabbits, the total amount of 113 semen collections were performed for the purpose of the research.

The parameters tested included: semen's consistency and color, the volume of liquid fraction, osmotic pressure, sperm concentration in unit area, sperm morphology with division to primary and secondary defects. The results were worked out statistically.

The research proved that the semen properties depend on a given individual. Statistically, there are no significant differences with the exception of one morphological abnormality, i.e. sperm with proximal cytoplasmic droplet. A significantly higher percentage of the defect was found with New Zealand white rabbits.

DE: rabbits, semen, ejaculate, liquid fraction of the semen, parameters of the semen

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 81–89.

TI: EFFECT OF BOARS CROSSING WITH BREED PIETRAIN ON PIGLETS REARING PERFORMANCE OBTAINED FROM PBZ SOWS

AU: Knecht D., Jankowska A.

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

LA: Polish

AB: The aim of the observations was to characterize breeding performance of polish white landrace sows in pure breeding in crossing with boars pietrain x duroc and line 990 x pietrain breed. Results indicate that crossing of sows polish white landrace with boars of pietrain x duroc and line 990 x pietrain breeds gives positive effects in relation to breeding performance, primarily the number of piglets born in the litter. Piglets after boars line 990 x pietrain had higher body weight than piglets from boars pietrain x duroc during all rearing period.

DE: boars crossing, pbz, piglets

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 91–99.

TI: THE COMPARISON OF METHODS OF AN ASSESSMENT OF β -HYDROXYBUTYRATE ACID AND GLUCOSE IN BLOOD OF COWS

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AD: ¹ Department of Animal Hygiene and Ichthyology, Faculty of Biology and Animal Science

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LA: English

AB: The aim of investigation was an evaluation of glucometer as rapid test marking change in β -hydroxybutyrate acid and glucose concentration in blood of cows fed on restrictive way. Moreover, the aim of this work was analyze of β -hydroxybutyrate acid and glucose content with use of different methods and on various biological materials (serum, plasma). The study was conducted on 20 cows, and 56 samples were collected. The highest increase in

glucose level in blood was observed in 1st hour after silage administration, while in the case of β -HBA in 5th hour. That time should be taken into consideration in diagnostic study. An assessment of β -HBA with the use of Optium Xido glucometer is more reliable with higher content of β -HBA in blood. In the case of low content of β -HBA in blood, differences between analytical methods and glucometer were significant ($p \leq 0.01$). Any differences between particular methods of glucose assessment were noted. A significant correlation between content of β -HB in full blood (glucometer) and serum (analytically), $r=0.958$, was observed. Similarly, a value of correlation coefficient for glucose was $r = 0.739$. High sensitivity and specificity prove the usefulness of Optium Xido glucometer in diagnosing of nutritional ketosis in tests over the clinic.

DE: cows, β -hydroxybutyrate, glucose, rapid test, glucometer

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 101–110.

TI: PARASITENGONA TERRESTRIA (*ACARI: ACTINOTRICHIDA, PROSTIGMATA*) IN THE NATURE RESERVE MUSZKOWICKI LAS BUKOWY (SW POLAND)

AU: Mąkol J.^{1,2}, Kobierska-Izakiewicz N.^{1,2}

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² Institute of Natural Sciences, Wrocław University of Environmental and Life Sciences

LA: English

AB: A survey aimed at establishing the species composition of terrestrial Parasitengona mites in the nature reserve Muszkowicki Las Bukowy (Muszkowice Beech Forest) has been carried out. Altogether 14 species representing five families and ten genera have been recorded from the study area, which constitutes almost 10% of Polish fauna of Parasitengona terrestria. For eleven species these are the first records from the area.

DE: Acari, Prostigmata, Parasitengona terrestria, faunistic survey, Muszkowicki Las Bukowy Nature Reserve

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 111–121.

TI: THE EFFECT OF BAICAL SKULLCAP SUPPLEMENTATION ON CHOSEN FERMENTATION PRODUCTS IN CAECAL CONTENT OF HYPERCHOLESTEROLEMIC RABBITS

AU: Miśta D., Króliczewska B., Zawadzki W.

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LA: Polish

AB: Baical skullcap is a valuable but little-known medicine plant in Poland. Its therapeutic properties are related to flavonoids content. The use of this plant in feeding of hypercholesterolemic rabbits made the authors investigate its effect on caecal microflora activity. Changes in feeding may modify fermented contents of the caecum, and consequently, the activity of microorganisms and the fermentation pattern. The research was conducted on 24 White New Zealand rabbits. The animals were divided into four groups: control group – fed with the standard mixture, group I – fed with the standard mixture with cholesterol addition, group II – fed with the standard mixture with cholesterol and baical skullcap root addition, group III – fed with the standard mixture with baical skullcap root addition. The rabbits were slaughtered after 6 weeks to receive the caeca. Chyme reaction and volatile fatty acids (acetic, propionic and butyric), lactic acid and ammonia concentration in the caecal content were measured. Skullcap root addition caused slight changes concerning VFA molar proportions, thus a decrease in acetate and propionate percentage and increase in butyrate percentage were noticed. The highest percentage of acetate was found in the group of animals fed with the mixture with cholesterol (64,51 mol%), and the lowest (61,77 mol%) in the group which received skullcap root addition. The lowest propionate (8,37 mol%) and the highest butyrate percentage (27,14 mol%) were also noticed in the group which received skullcap addition. The inconsiderable changes mentioned above prove that there are not any unfavourable impacts of baical skullcap root on caecal microflora processes in rabbits.

DE: cecum, fermentation, baical skullcap, cholesterol, rabbit

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 123–134.

TI: VERMICULITE – A CARRIER FOR FEED ADDITIVES

AU: Patkowska-Sokoła B.¹, Zieliński S.², Bodkowski R.¹, Janczak M.¹

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² Institute of Inorganic Technology and Mineral Fertilizers, Wrocław University of Technology

LA: English

AB: Supplying of livestock with unsaturated fatty acids with feed has been recently a subject of numerous research due to their influence on a composition and fat content in adipose tissue or milk products (Raes et al. 2004). Since the amount of added acids is small, their uniform distribution in feed becomes an issue. The easiest way is to spread them on a carrier that facilitates the homogenization of the whole system by simple, mechanical mixing. Such a

carrier should be neutral for an organism, characterized by a large surface and well sorptive properties. That requirements are fulfilled by mineral carriers from aluminosilicates group, where silty minerals are of special importance.

DE: silty minerals, vermiculite, feed additives

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 135–142.

TI: THE EFFECT OF CROSSING ZŁOTNICKA WHITE SOWS WITH LARGE WHITE POLISH AND POLISH WHITE LANDRACE BREEDS ON BREEDING PERFORMANCE

AU: Szulc K.¹, Buczyński J.T.¹, Skrzypczak E.¹, Knecht D.²

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² Institute of Animal Breeding, Wrocław University of Environmental and Life Sciences

LA: Polish

AB: The aim of the observations was to characterize breeding performance of Złotnicka White sows in pure breeding and in crossing with Large White Polish and Polish White Landrace breeds. Results indicate that crossing of Złotnicka White sows with Large White Polish and Polish White Landrace breeds gives positive effects in relation to breeding performance, primarily the number and weight of piglets born in the litter. Crossing with Large White Polish boars proved to be the best variant. Thus, it seems justified to conduct further observations on a more numerous population of animals.

DE: swine, breeding performance, Złotnicka White, crossing

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 143–148.

TI: STUDIES ON APPLICABILITY OF FERTILITY INDEX FOR DAIRY COWS IN THE CURRENT BREEDING ENVIRONMENT

AU: Tomaszewski A., Chudoba K., Hibner A.

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

LA: Polish

AB: Analysis on milk performance and fertility of 1147 cows kept in a high yielding herd of South-Western part of Poland was carried out. Three genetic groups of cows were distinguished: up to 50%, 50 to 75% and above 75% of HF genes share. Detailed fertility analysis concerned only cows which calved at least 3 times (n=714). Fertility Index was calculated based on age at first calving and the average length of intercalving periods during performance life. It was shown that “poor” value of Fertility Index (FI) characterised 2,9% animals, while “good” value of FI was connected with every second analysed cow (51,7%). Primiparous cows calving at the age of 24 to 28 months characterised with „good” or „average” values of FI despite relatively long (14 and 14,5 months) intercalving periods, therefore poor applicability of FI in the field use was stated.

DE: cows, milk yield, fertility index

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 149–159.

TI: CHARACTERISTIC OF SLAUGHTER HORSES, APPOINTED TO THE ITALIAN MARKET

AU: Walkowicz E.

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LA: Polish

AB: Meat usage and export of slaughter horses is not very popular subject of discussion, although it is still one of the main branches of agriculture export. Therefore the present study detects, which type of the horses is preferred on Italian’s market, which is the main consumer of horseflesh. The research is based on 3119 slaughter horses, bought by private importer.

It has been found that, slaughter foals in age of 6 months, 1 year and youngsters have the biggest rate of demand. Whereas older slaughter horses in age above 12 years have the lowest rate of demand. Substantial proportion of slaughter animals come from meat breeding farms. The conclusion is that this type of usage is gradually transforming into professional branch of production

DE: the meat use, export, trade

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., 2008, LVI, 566: 161–170.