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ABSTRACTS

TI: THE EFFECT OF AGROTECHNOLOGICAL FACTORS ON THE QUALITY OF MAIZE – FORAGE SOYBEAN INTERCROP SILAGES

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AB: The aim of conducted study was to determine the agrotechnological factors' impact: different sowing ratio combined and two methods of weed control (mechanical vs. chemical-herbicide) on quality of maize-forage soybean intercrop silages. The following sowing ratio (in thousands of seeds · ha⁻¹) were applied: A – maize 100, soybean 0; B – maize 80, soybean 100; C– maize 80, soybean 200; D – maize 40, soybean 300; E– maize 20, soybean 400; F – maize 0, soybean 500.

All silages were of very high quality, however silages made from intercrops were characterized by better aerobic stability compared with maize and soybean monocultures silages. The intercrop silages contained similar crude protein value (75,4–78,9 g·kg⁻¹ DM) – lower dose of nitrogen fertilizer was compensated for higher share of soybean in sowing ratio. Despite the fact that an increase in soybean share in intercrop sowing ratio increased fiber fraction content in silages, digestibility of organic matter and crude protein of these silages were not deteriorated. Any differences in chemical composition, quality and digestibility between mechanically and chemically protected silages were not observed.

DE: maize, forage soybean, intercrop, agrotechnological factors, silage, quality

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXX, 598: 9–20.

TI: ANALYSIS OF REPRODUCTION USE OF PURE ARABIAN MARES FROM MICHAŁÓW STUD IN PERIOD 1995–2009

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AB: The aim of this study was to determine some reproduction rates of Arabian horses reared in Michałów Stud between 1995 and 2009 year. The influence of different factors on reproduction rates was studied.

The study included 305 breeding's career of Arabian mares. We analyzed a total of 1106 pregnancies and the average duration of pregnancy, the length of interpregnant and interdelivery periods were calculated. We estimated rates for each year and the entire study period (years 1995–2009).

Our experimental data suggest that both age and parturition season of mares significantly affect the duration of pregnancy. There was, significant differences between the length of their duration in the group of mares 7–10 years (448.70 ± 281.73 days) and a group of over 15 years (555.94 ± 347.01 days). Analysis of the influence gender on the length of pregnancy indicated that with increasing length of gestation, the number of births colts was higher, while the shorter pregnancies were characterized by an increased number of fillies born ($P \leq 0.001$). Our interest has been focused also on daily distribution of births. We observed trend to birth at night (61,03%) than during the day (38,97%) and this differences were significantly important.

DE: Michałow stud, reproduction rate, Arabian horses

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXX, 598: 21–34.

TI: ANALYSIS OF HORSES CONFORMATION COMPETING IN SHOW JUMPING AND DRESSAGE

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AB: The aim of the study was to demonstrate the differences between the likes of horses and beginning in the discipline of show jumping and dressage. The lowest class of sport in both disciplines was the class P. The conformation of 36 jumping horses and of 30 dressage horses was evaluated based on 21 measurements and 5 body indices. Generally, jumping horses were smaller than dressage horses. There were statistically high differences in height at the withers and circumference behind the last rib. Hind limbs of jumping horses were significantly longer in the distance from stifle to hock joint in comparison to dressage horses. Jumping stallions in comparison with dressage stallions were statistically significantly different in the distance from the hock joint to the ground. Width of the front of dressage stallions and geldings was statistically higher in comparison to jumping stallions and geldings. The dressage mares were highly significantly higher at the withers and significantly higher in the back in comparison to jumping mare. Calculated indices confirmed the greater massiveness horse of dressage compared with horses of show-jumping.

DE: horses, show-jumping, dressage, conformation, measurements, body indices

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXX, 598: 35–44.

TI: POLYMORPHISM OF THE PRION PROTEIN *PrP* IN POLISH HEATH SHEEP FLOCK FROM EXPERIMENTAL FARM IN ŻELAZNA

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AB: The study was conducted in Experimental Farm in Żelazna on 498 ewes of the foundation stock, 32 stud rams and 125 herd replacement ewes and 71 rams intended for further breeding of Polish Heath Sheep. All animals were subjected to the identification of the *PrP* prion protein gene. The higher genetic diversity of alleles and genotypes of scrapie in stud rams (7 genotypes and 4 alleles) and in rams for further breeding (6 genotypes and 4 alleles) than in ewes of foundation stock (6 genotypes and 3 alleles) and in herd replacement ewes (5 genotypes and 3 alleles) was found. The year of study was insignificant effect on the frequency of alleles and genotypes of scrapie in ewes of the foundation stock and in stud rams. In case of herd replacement ewes and in rams for further breeding the year of study

was highly significant and significant effect on the frequency of alleles and genotypes of scrapie. In herd replacement ewes and in rams for further breeding observed a significant and highly significant effect of year of study on increasing the frequency of genotypes and alleles containing ARR and ARQ in contrast to decreasing the frequency of alleles: AHQ and ARH. Allele VRQ (not scrapie resistance) was not observed in both group. The obtained results especially for herd replacement ewes and rams for further breeding indicates to conduct breeding work towards increasing resistant scrapie genetic. That indicates the validity of the development of breeding program for Polish Heath Sheep breed.

DE: sheep, *PrP*, distribution of alleles and genotypes

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXX, 598: 45–54.

TI: ANALYSIS OF SELECTED BIOMETRICAL DIMENSIONS AND BIOMETRICAL INDICATORS OF POLISH KONIK

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AB: The aim of this thesis was to analyse the impact of factors such as line, kin, and family on the three basic biometrical dimensions as well as on two main biometrical indicators of Polish Koniks. The research has been performed on 138 Polish Koniks which were bred in Lower Silesia and southern Greater Poland between 1990 to 2011. There was found that the genealogy line has a significant and highly significant influence on the circumference of cannon and bone index, a significant influence on the height at the withers and chest circumference. The family had a significant impact influence on chest circumference and significant and highly significant influence on height at withers, circumference of cannon, the bony index and capacity index. On another hand the kin had significant influence only in case of the bone index and significant and highly significant influence on the height at the withers. Among the examined population there was found the advantage of horses in the versatile utility type (78.9%). The examined dimensions and biometrical indicators showed an increase the caliber of Polish Koniks bred in Lower Silesia and southern Greater Poland.

DE: Polish Koniks, biometrical dimensions, exterior indices

SO: Zesz. Nauk. UP Wroc., Biol. Hod. Zwierz., LXX, 598: 55–64.