

than 2 cm (height) of uterine fluid pre and post insemination, endometrial culture. The treatments consisted in intramuscular administration of oxytocin (10–20 UI TID), associated or not to: flushing with sterile saline, or flushing added with antibiotics or with antiseptics. The pregnancy status of the mare was determined 14 and 40 days after ovulation by transrectal ultrasonography. The chosen treatments were correlated to the kind of semen (fresh/cooled) and to the presence of uterine fluid pre and post insemination, but not to softening of cervix and cultural examination. Pregnancy rates resulted significantly lower in mares with intraluminal fluid post insemination. No differences at 14 and 40 days of pregnancy were recorded between the kind of semen nor between treatments. In practical sets, clinical parameters and kind of semen seem to influence the treatment of PMIE more than laboratory examinations, in the mare.

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The fertility rate following the superficial cervical artificial insemination with fixed time system after the induction of oestrus and ovulation in mixed bred goats

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Artificial insemination plays an important role in genetic improvement. However the use of AI with thawed frozen semen in Thai goat production is limited due to the lack of genetically superior males and the insemination technique. The present study was to evaluate the fertility rate after the superficial AI with once or twice fixed time insemination in oestrous synchronized goats. Thirty-eight primiparous goats were synchronized by using an intravaginal sponge containing 20 mg of flugestone acetate for 13 days and 250 IU eCG given at sponge removal. A vasectomised male was presented during the induction. Goats were equally assigned to two groups of 19. Group 1 goats were superficial cervical inseminated once with 150 million frozen thawed spermatozoa at 54 h after sponge removal. Group 2 goats were superficial cervical inseminated twice with 150 million frozen thawed spermatozoa at 50 and 56 h after sponge removal. All goats in both groups showed oestrous behaviour when the male was presented. Pregnancy was diagnosed by ultrasonography at 42 days after insemination. The pregnancy rate in group 1 and 2 were 15.8% and 38.7% respectively ($p < 0.05$). These results indicate that two inseminations with frozen thawed semen and fixed time AI after oestrous synchronization increases pregnancy rate in primiparous goats significantly. The question remains open whether this increase is due to the double insemination or to the higher number of inseminated spermatozoa or to both.

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Measurements of fetal growth via transabdominal ultrasonography during mid-pregnancy in ewes

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The aim of the present study was to determine values of some measurements of foetal growth via transabdominal ultrasonography (5 MHz sector probe) during mid-pregnancy (50–84 days) in ewes from Synthetic Population Bulgarian Milk. The study was a continuation of our previous work, in which we evaluated the fetal growth between 25 and 63 days. The following measurements (in mm) were taken on days 50, 60, 70 and 84 of pregnancy: head diameters – biparietal (BPD) and occipito-nasal (ONL) (except day 84), placentome size: width and length. The effect of gestational phase on foetal growth was analysed by one way ANOVA and coefficients of correlation (r) were established between gestational phase and mea-

surements. The gestational phase influenced significantly ($p < 0.001$) all taken measurements. The mean values for BPD were 14.26, 20.92, 25.94 and 31.43 respectively for day 50, 60, 70 and 84. On day 50 the mean value for ONL was 22.82 and reached 44.4 on day 70. The size of placentomes varied very much, as we observed in our previous work. On days 50 the mean values were: length – 18.54 and width – 13.28, and reached on 84 day mean length – 37.24 and mean width – 25.11. It was established high, positive and significant correlation between head diameters, placentome size and gestational age ($r = 0.97^{***}$ – BPD, $r = 0.94^{***}$ – ONL, $r = 0.78^{***}$ – length and $r = 0.72^{***}$ – width). Taking together the results of the present and previous study, we recommend the BPD as primary measurement for prediction of fetal age.

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Estrus induction trials in early anestrus bitches with GnRH implants: deslorelin

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We present the results of estrus induction following the implantation of deslorelin during the first week of anestrus. Seven bitches were studied over a total of 10 estrus cycles. During the first week of anestrus (progesterone below 1 ng/ml) each female received a 4.7 mg deslorelin implant (Suprelorin©, Virbac) subcutaneously of the medial part of the left thigh. A gynecological exam was performed every other day incl. assessment of vulval swelling and discharge, vaginal smear, progesterone concentration, and ovarian ultrasound. The implant was removed 5–7 days later. Females in heat were left with an entire male once the progesterone concentration had reached 10 ng/ml and pregnancy was monitored by ultrasound. All bitches came into proestrus, 50% of the bitches went on to estrus, but only one bitch became pregnant and whelped. Follicular development was observed in all cases by ultrasonography, but ovulation and luteinization were only seen in the latter case. Vaginal smears revealed changes in vaginal cytology that were consistent with estrus. The bitches presented a very short estrus period (5 days on average) and no granulocytic neutrophils were observed in metestrus smears. The progesterone concentration remained around 1 ng/ml in 90% of cases, with the exception of the female that ovulated. In conclusion, Deslorelin implantation during the first week of anestrus in bitches, results in anovulatory heat.

P164

A case of longitudinal vaginal septum in a mare

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In opposition to women, few reports exist concerning developmental anomalies of the caudal reproductive tract in the mare. Longitudinal vaginal septum (LVS) occurs when there is failure in the fusion of Mullerian ducts or in the regression of the vaginal septum. It can be obstructive or not, and it is frequently asymptomatic, being diagnosed in routine exam. A 4-year-old primiparous mare with a history of defensive reactions at work and severe pain during an attempt to inseminate was presented at the Equine Clinic of the University of Liège. Endocrinology was normal and transrectal exam revealed a normal end-of-estrus tract. A vaginal exam showed a complete non-obstructive LVS, leaving a ± 3 cm communication between both hemivaginas just behind the cervix that could consequently be observed from both sides of the septum. Although the cervix looked normal, signs of a vaginitis and haematomas on the vestibulo-vaginal sphincter were present. The L vs. was completely resected by thermo-cauterization (Ligasure Atlas 37 cm Hand Switching Laparoscopic Sealer/Divider, Covidien, Belgium) under sedation and epidural analgesia. The vaginitis was treated with vaginal lavages with 1% iodine solution.

Local signs of inflammation regressed after 4 days and the mare was discharged. The mare resumed work after 45 days and signs of discomfort rapidly regressed. Reproductive prognosis will depend on the cervix functionality that hasn't yet been assessed. L vs. can be a primary or secondary cause of infertility, increase the risk of dystocia or alter sport performance. However, it is often asymptomatic and an incidental finding. Consequently, it is most likely under-diagnosed which accounts for the very few reports of this condition in mares.

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Comparison of the effect of dexamethasone and flunixin meglumine administered to mares at insemination time in the modulation of mating induced endometritis

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Recently, successful treatment of mating induced endometritis with a single dose of dexamethasone or with non-steroidal anti-inflammatory drugs administered at the time of breeding has been reported in mares. However, a higher incidence of ovulatory failure in mares treated with high doses of flunixin meglumine has been reported. This study compares the anti-inflammatory effects of dexamethasone or flunixin meglumine administered at the time of insemination. Thirty three Standardbred mares inseminated with cooled semen were included. Intrauterine fluid, uterine folds, and number and dimension of follicles or corpora lutea were recorded at ovulation induction time (administration of 2000 UI human chorionic gonadotropin; V1) at insemination time (V2) and 24 h after insemination (V3). At V2 11 mares received a single dose of dexamethasone (50 mg) (D group), 11 flunixin meglumine (500 mg F group) and 11 mares saline (10 ml, C group). Uterine cytology samples were collected by brush at V1 and V3. The number of neutrophils in uterine cytology was significantly increased in V3 compared to V1 only in the C group ($p = 0.044$). Intrauterine fluid observation, occurrence of ovulation failure and corpora lutea diameter did not differ among the three groups. A significant reduction of uterine folds was observed from V1 to V3 in the D group ($p < 0.0001$) and in the C group ($p = 0.0002$). In conclusion, the administration of the tested anti-inflammatory drugs reduces the number of neutrophils in endometrial cytology samples and does not affect the incidence of ovulation failure.

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Reducing duration of long-day treatments does not modify the capacity of male goats to induce ovulation in anestrus does

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The objective of the study was to determine whether male goats rendered sexual active by exposure to different long-days (LD) treatments are able to induce ovulation in seasonal anestrus goats. Males were allocated to three groups and kept in open pens ($n = 5$ each). One group was submitted to 75 days of LD (16 h light/day) from November 1st (75-LD); the second group was subjected to 45 days of LD from December 1st (45-LD); the third group was subjected to 30 days of LD from December 15th (30-LD). All treatments ended on January 15th; then, males were kept under natural photoperiodic variations. Multiparous female goats were used. One group was isolated from males ($n = 13$). On April 2, 3 experimental groups of females were exposed during 15 days

to one of the three male groups ($n = 3$ males per group; 75-LD: $n = 25$; 45-LD: $n = 27$, and 30-LD: $n = 26$). Ovulations were assessed by transrectal ultrasonography 17 days after being exposed to bucks. The proportions of goats that ovulated were greater in those in contact with males from 75-LD (92%), 45-LD (89%) or 30-LD (88%) than in those isolated from them (0%; $p < 0.05$). There were not differences in the proportions of females that ovulated when exposed to the treated males ($p > 0.05$). These results indicate that reduction of long-day treatments from 75 to 30 days does not modify the capacity of male goats to stimulate the ovulatory activity in goats during seasonal anestrus.

P167

Preliminary results: early sex determination in the canine foetus by echotomography

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Foetal sex determination is a key element in the economics of animal breeding; the value and management of progeny is highly dependent on gender. Twenty-five bitches were monitored between 25 and 50 days of gestation to determine the sex of their foetuses by ultrasonography using a 12.5 MHz probe. After the 31st day, sexing was possible due to the position of the genital tubercle in relation to the pelvic limbs, tail, and umbilical cord. On ultrasound 34 females and 36 males were detected on day 33, at birth there were 30 females and 40 males (including the 10 foetuses autopsied at 35 days). The external genital organs of 10 foetuses autopsied after caesarean section at 35 days of gestation, were examined macroscopically and histologically. A novel PCR technique was developed to detect the SRY gene in formaldehyde-preserved tissues taken from the 10 foetuses. Histologically, cartilaginous differentiation was visible in both the male (penile buds) and female (possibly relating to clitoral tissue). PCR testing of the autopsied foetuses gave accurate results with eight females and two males. There was good statistical correlation between sexing by ultrasonography and sexing at birth (Kappa coefficient 0.8, percentage error 8.5%). Prenatal sexing is possible from day 31 of gestation in bitches.

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Pre-pubertal female goats in socio-sexual contact with males advanced the onset of puberty

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Puberty is the age at which a female goat has her first ovulation and/or oestrous behaviour. The aim of this study was to determine whether the presence of bucks modify the onset of puberty. Female kids were born in January (17 ± 2 days) and separated from their mother at 3 days of age. All females were fed with goat milk until weaning at day 40. Thereafter, females were randomly assigned to one of two groups ($n = 9$ each). One group of goats remained isolated from males and the other group had visual, olfactory, auditory and restricted tactile contact with males through a fence. Blood samples were taken at weekly intervals to assess plasma progesterone concentrations. Values > 1 ng/ml were considered indicative of puberty. The proportions of does that ovulated were analyzed by Chi square test. Proportions of does that reached puberty at 297 days of age was different between does in contact with males (9/9; 100%) than isolated ones (5/9; 55%; $p = 0.02$). In those does, puberty was reached at 269 ± 4.7 days of age. We conclude that female goats in socio-sexual contact with males had advanced onset of puberty.