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### Determining Fetal Gender: Practice Makes Perfect

For nearly 20 years, veterinarians have been determining fetal gender using transrectal ultrasound. While it's exciting for a mare owner to know the sex of the new addition before it arrives, just how accurate are these ultrasound procedures?

According to Italian field veterinarian Marco Livini, DVM, of Veterinari Associati Ippovet, in Milan, these transrectal ultrasounds can be up to 100% accurate in determining fetal sex when practiced on a regular basis at a determined gestational age. Livini presented his findings at the 2010 American Association of Equine Practitioners convention held Dec. 4-8 in Baltimore, Md.

Livini performed 572 transrectal ultrasounds between 2006 and 2008, categorizing each by gender between 55 and 70 days of gestation, and between 90 and 150 days of gestation. The mares Livini examined were of a variety of breeds and ranged in age from 3 to 18 years.

By focusing on certain anatomical parts for the 55- to 70-day ultrasounds and certain parts for the 90- to 150-day ultrasounds, Livini found it was relatively easy to determine fetal sex. Between 90-150 days of gestation, in female fetuses, the "target organs" that Livini focuses on are the teats and the mammary gland, the vulva, the clitoris, and the gonads. In male fetuses, Livini suggests focusing on the penis and prepuce, the urethra, the epididymis and vascular pedicle, and the gonads.

He was able to correctly determine 203 fetal genders out of 232 examinations between 55 and 70 days of gestation. He made 24 more after longer examination of the ultrasound (Livini implemented a 150-second time limit for his determinations), and five of his determinations were incorrect.

Livini performed 341 transrectal ultrasounds on mares between 90 and 150 days of gestation and was correct in 299 determinations. Only one fetus was incorrectly labeled. According to the study, he did not determine the genders of the other 41 fetuses within the 150-second time limit.

Further analysis of his data revealed that Livini was able to correctly identify 100% of the fetus' sexes between 110 and 130 days of gestation.

"The aim of the ... work is to show that transrectal ultrasound determination of fetal gender between 55 and 75 (days gestation) and 90 and 150 days of gestation can be accomplished in a timely manner in routine stud practice even at the peak of the breeding season, if the veterinarian is experienced in reproductive ultrasonography," Livini wrote.