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Quels paramètres liés à l'insémination peuvent expliquer les variations des performances de reproduction en élevage ?

Focus sur le verrat et la semence.

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What parameters can explain the variability of reproduction performance in pig farms? Focus on boar and semen characteristics
The objective of this retrospective study was to evaluate the relationship between boar, semen, female or insemination (AI) parameters and field fertility results (pregnancy rate and total born/litter). From 2003 to 2011, 5011 ejaculates were collected in the INRA-UEICP boar stud, from 304 boars of 2 genotypes (Pietrain or Large White x Pietrain). Fresh semen was evaluated for 5 criteria including subjective microscopic mobility (70% minimum), Bishop motile score (1 to 4.5), volume and concentration.27366 mono-spermic AI ($3x10^9$ total sperms/dose, 2-3 doses/sow) were performed in 25 private sow herds, using females of various parities. According to mixed model analysis, pre-dilution subjective semen factors did not account for large variations of reproduction performance. Use of young boars (<1 year) should be limited because of lower fertility (87.5 vs 89%, p=0.007). Herd factors, year, season, sow parity, age of semen at 1st AI, day of 1st AI and boar genotype all affectedboth fertility and litter size. Repeat-breeding reduced fertility only (76 vs 89.2% p<0.0001). As conventional semen parameters have a low contribution tothe results, further research is required to optimize semen use through new quality criteria and threshold values, especially at higher dilution rates. Farm factors (semen and AI management) should also be more precisely investigated.