AI in pig breeding in Estonia

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The role of a male breeding animal is highly significant in livestock breeding. Particular importance it has in pig production due to very rapid turnover rate of pigs. Application of AI is increasing from year to year: in 1997 6% of the total number of pigs was inseminated artificially, whereas in 2001 this number was 46.5%. Data of 6601 sows and 1015 boars with 10 411 litters, obtained from database of Animal Recording Centre in 1999...2001, was used to analyze heritability of litter size and effect of mating method on fertility traits. The following breed combinations were investigated: EL, ELW, H, Pi, EP♂xELW♀, ELW♂xEP♀ and Pi♂xH♀. Average heritability of litter size at birth was h^2=0.08. 9.80 piglets per litter were born in litter by using AI, which was significantly lower (-0.44) than in case of natural mating. Significantly smaller litter size was observed in purebred EL (-0.39) and ELW (-0.62) breeds by using AI (P<0.001). H and Pi♂xH♀ combinations had larger litters at birth when AI was used. NM showed superiority among parities, giving significantly larger litters from 1st to 6th parities. A rapid increase in application of AI shows that farmers have calculated advantages of AI and found that even in case of smaller litter size, they do not loose their profit, as they can use better genetic material.