

SNPs Found for Litter Birthweight, Litter Uniformity

14 January 2013

GLOBAL - TOPIGS has found several Single Nucleotide Polymorphisms (SNPs) which explain genetic variation in litter birthweight and litter uniformity and can be used to breed sows that farrow large, heavy and uniform litters.

These SNPs have a correlation of almost 0.5 with the animal's true breeding value. This means that almost 50 per cent of the genetic variation for birthweight and uniformity can be explained by these SNPs. The reliability of breeding values of young male selection candidates increases by almost 30 per cent compared to cases where SNP information is not used.

The newly found SNPs speed up genetic progress. The genetic quality of young male selection candidates for litter birthweight and litter uniformity can now be predicted before the end of their performance test. In the past, genetic quality could only be differentiated between full sibs for these traits based on the results of their offspring.

Piglets that start with a high birthweight perform better. High litter birthweights and uniformity in birthweights within litters are therefore highly advantageous for modern pig production systems. Piglets with a higher birthweight are marketed earlier without detrimental effects on carcass quality. Heavy uniform litters make production easier and require less labour. The overall margin is therefore higher for heavy piglets.

With genomic selection technology TOPIGS is able to speed up the genetic progress for these highly relevant economic traits. TOPIGS has a unique dataset in which over 500,000 individual birthweights and survival records are collected yearly. TOPIGS has collected birthweights for several years and now has a database with over five million birthweights. Combining this dataset with genomic selection technology offers unique opportunities for creating extra genetic progress.

With a production of more than 1,100,000 crossbred gilts and over seven million doses of semen per year, TOPIGS is one of the biggest genetics suppliers in the world. In several countries, TOPIGS is either the market leader or one of the major suppliers. TOPIGS stands for progress in pigs. This means research, innovation and genetic improvement are the cornerstones of our company. By continuously improving our products, we enable our clients to achieve maximum results.

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