



Recording litter size and perinatal piglet survival

- + The trait currently used in genetic evaluations for litter size is the **total number of piglets born per litter**, including stillborn but not mummies.
- + Genetic evaluations for **perinatal survival rate** will be added to the current system for sow productivity traits. The perinatal survival rate is estimated through the difference between the total number of piglets born per litter and number of piglets alive at 24 hours and is expressed as a percentage of the former
- + Therefore, there is a need to record the following in addition to total number of piglets born per litter:
 - the number of stillborn piglets (optional)
 - the **number of piglets alive after 24 hours**
 - whether the sow was assisted before or during farrowing (Y/N)
 - the level of assistance to the sow (optional)
- + The **number of stillborn piglets** is the number dead at farrowing, or at the first time the litter is observed (day 0). Ideally, it is the number of piglets which did not breathe after being born. Every piglet dead when the litter is observed, but showing evidence that it was alive at birth must be excluded from the number of stillborn piglets. Dead born piglets are usually found at the rear of the sow, but some of these piglets may also have breathed for a while.
- + For **litters born unobserved**, for example during the night, the number of stillborn piglets, if recorded, should be equal to the number of piglets dead the first time the litter is observed, excluding dead piglets for which there is evidence of respiration.
- + The **number of piglets alive at 24 hours** is equal to the number still alive the day after farrowing, observed as close as possible to 24 hours after farrowing.
- + The number of stillborn piglets and piglets alive at 24 hours must be recorded **before any cross fostering**.
- + Some piglets may die because of being **crushed by the sow** during the first 24 hours. These piglets have to be excluded from the number of piglets alive after 24 hours. Perinatal piglet survival must include the ability of the sow to give birth to viable piglets, but also her capacity to keep them alive.
- + Piglets dying from **accidental reasons independent from the sow**, for example by getting stuck in the farrowing pen, should be counted as piglets alive after 24 hours.

Trait	Definition	Comments
TNB	Total number of piglets born	Total piglets born, including stillborn, excluding mummies
NSP	Number of stillborn piglets	Piglets born dead
NPA1	Number of piglets alive after 24h	TNB minus stillborn minus piglets dead during the first 24 hours but including piglets dead from accidental reasons independent from the sow
PSR	Perinatal Survival Rate	$(TNB - NPA1) \times 100 / TNB$