

Crush-side semen analysis

Collecting and assessing semen from bulls is a profession that involves years of practical experience and theoretical knowledge.

According to the Australian Cattle Veterinary (ACV) Bull Breeding Soundness Evaluation book, experience in the USA and Australia suggests that an acceptable minimum threshold for bulls for natural mating is more than 30% progressively motile sperm. However, because bulls may be required to provide semen for freezing or single mating situations, ACV has adopted a semen standard (a tick) of a 60% threshold for progressively motile, though bulls which achieve at least 30% progressive motility will rate as a Q (qualified).

Without a computer assisted sperm analysing machine (CASA) and based on environmental factors mentioned below, in my experience, the highest semen percentage alive and motile (on-farm) rate is 85%.

Factors affecting semen quality in bull testing:

- Thermal stress – sperm are sensitive to both heat and cold e.g. semen straight from the bull at 37 degrees Celsius would require collection equipment to be at the exact temperature as the bull semen. Exposure to temperatures just a few degrees above or below body temperature will kill large numbers of sperm, making it impossible to give a bull 100% just in temperature variances. This is why a warm stage set at 37 degrees celsius, connected to your microscope, is a vital piece of equipment to evaluate semen.
- Exposure to unhygienic environments - collecting a bull on farm and not in an artificial breeding centre where hygiene is paramount allows a certain amount of contamination (dust and dirt). Contamination will also decrease the percentage of semen alive.

(Paul Kenny – Bull Testing)