AUSTRALIAN Pork

Fact Sheet

FACT SHEET

REPRODUCTIVE HEALTH

What is "Reproductive Health"?

Your pig herd is "reproductively healthy" when (1) you are meeting breeding herd targets for reproductive performance parameters on your farm that are in-line with industry targets, (2) there are no abnormal clinical signs of disease in your pigs, (3) the welfare of pigs is good, and (4) you are making money!

Breeding Herd Targets

The reproductive parameter targets you set for your farm will be based on industry norms and what is reasonable for your farm. As a **minimum**, you should record:

- Sow matings: sow ID, date(s) mated and boar(s) used;
- Sow farrowings: sow ID, date of farrowing, number of piglets born alive, number of piglets born dead (stillbirths and mummies); and
- Sow weaning: number of piglets weaned, date of weaning.

To assist with "fine tuning" your herd's breeding performance, you should also record:

- Sows that fail to farrow: return-to-heat date(s), pregnancy-test-negative sows, abortions, deaths/culls; and
- Pre-weaning deaths: age of deaths, suspected causes of death.

Table 1 below is a list of generally accepted breeding herd targets for the industry. Also included are performance figures, above which you should take action!

Table 1: Breeding Targets and Intervention Levels for Piggeries

Parameter	Target	Intervention level (call a vet!)
Farrowing rate[1]	85%	<80%
Conception rate[2]	90%	<85%
Abortion rate	<1%	>2%
Not-in-pig sows[3]	<2%	>3%
Annual sow death rate	<3-5%	>6%
Annual sow euthanasia rate	<4%	>5%
Annual sow culling rate	<30%	>40%
Total born piglets	>13/litter	<11/litter
Born alive piglets	>11.5/litter	<10/litter
Stillborn piglets	<6%	>8%
Mummified piglets	<2%	>3%
Pre-weaning mortality	<10%	>12%

[1]Farrowing rate: No. sows that farrow / No. sows mated x 100
[2]Conception rate: % of sows that don't return to heat 21 days post-mating.
[3]Not-in-pig sows: those sows that go to full-term but don't farrow.

Reproductive loss

Abortions

In the latter stages of pregnancy (after about Day 50), infection of the sow and/or the placenta with a range of micro-organisms often results in abortion. Abortion may occur earlier, but may go unnoticed due to the small size of the foetuses.

Abortions may follow placental infections (e.g. Leptospirosis), or may occur when micro-organisms enter the blood stream of the sow, resulting in blood poisoning and fever (e.g. erysipelas). Abortion occurs as a result of prostaglandin production by the inflamed uterus acting on the placenta or ovary. Some disease agents (parvovirus, enterovirus) cross the placenta without causing a reaction.

At around Day 60 of pregnancy, the foetus develops its immune system, and this immune response increases with gestational age. After day 70, foetal infection is less likely to cause foetal death. However, if the placenta is infected, the pregnancy may still be lost.

Mummies

When piglets die during pregnancy, they are sometimes retained – and appear at farrowing as "mummies". Mummified piglets can vary in size, but will look shrivelled, black/brown and dehydrated. Mummies can occur normally in very large litters, when individuals die due to placental failure/over-crowding of the uterus. Large numbers of mummies can result from infection with porcine parvovirus, when progressive embryonic death occurs as the virus spreads within the uterus.

Photo: Mummified Piglets that have died at varying stages of Pregnancy

Stillbirths

Stillbirths occur when piglets die during the farrowing process – mostly due to lack of oxygen. Stillborn piglets look like newborn piglets – but are obviously dead. You can tell if a piglet is born dead (compared to dying soon after birth) in that they still have "slippers" or "snow boots" still on their feet – indicating that they have not walked.

Photo: A Stillborn Piglet. Note the "slippers" on the feet

Infectious agents are not common causes of stillbirths in pigs. Risk factors for stillbirths include: large litters, old sows, hot weather, and a history of stillbirths within individual sows. However, if stillbirth rates exceed 10% of pigs born, it may be disease-related. Any agent capable of crossing the placenta may cause stillbirths (e.g. Leptospirosis).

While Parvovirus may cause stillbirths, it is more likely to be associated with foetal mummification.