



Welcome to the June edition of the Garth Newsletter.

The oestrous cycle

The oestrous cycle of swine lasts approximately 21 days (18-24), it is divided into two main phases: the luteal phase and the follicular phase. In the luteal phase we can distinguish a heat, ovulation, corpus luteum development stage and luteal regression; in the follicular phase there is the early follicular phase and the late follicular phase with the pre-ovulatory surge of gonadotropins.

The first day of standing heat is designated as day 0 of the pigs cycle. On that day the ovary is at the peak of its development, it is the pre-ovulatory stage and in the next 1-2 days ovulation occurs. On that day we observe external symptoms of the heat such as: immobilisation or “standing” in response to back-pressure from a boar, another gilt or sow, or from a person, redness of the vulva and “standing reflex” without any direct physical stimulation just with a boar exposure. Prior to ovulation there is a surge of luteinising hormone (LH) and high concentrations of follicle stimulating hormone (FSH) and prolactin. Heat lasts approximately 48 hours, with the ovulation occurring about 36-40 hours from the first signs of the heat. From day 2-4 oestrogen, LH, and FSH all decline, and the female is no longer sexually receptive to the boar. The ovarian follicles, which released oocytes during ovulation, begin the

process of luteinization to become the corpus haemorrhagicum, and then the corpus luteum.

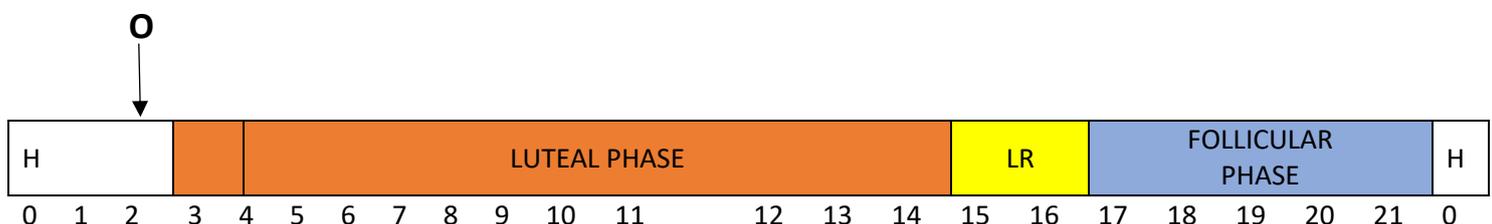
With the formation of the corpus luteum progesterone secretion begins. The level of the progesterone rises from day 3-4 of the cycle to the maximum concentration around day 10-12 of the cycle and then slowly declines to days 13-15 (unless pregnancy has been initiated) and then falls rapidly. At this time, the presence of viable embryos will enable pregnancy to persist. If no viable oocytes are detected by day 15 of gestation, prostaglandin F2 alpha (PGF2α) will act upon the corpus luteum, causing it to regress and reduce secretion of **progesterone**. Luteal regression phase lasts about 48 hours, it starts with the rapid decrease of the progesterone and level of PGF rises rapidly. In the follicular phase (d 17 to 21) oestrogen and follicle stimulating hormone (FSH) are increasing in preparation for heat and ovulation. Small pulses of luteinizing hormone (LH) also begin to be released, with increasing frequency.

In the next article we will use this information and discuss the hormonal control of oestrus with description of various pharmaceutical products that may be used to manipulate swine reproduction.

O- ovulation

H-heat

LR- luteal regression



Farm Business Survey



Formed in 1936 by the Ministry of Agriculture and Fisheries (MAF) under the name 'the Farm Management Survey, the Farm Business Survey continues to this day, commissioned by DEFRA but carried out independently by Promar International. Data from the Farm Business Survey informs government, having been used to form the 2020 Agriculture Act and DEFRA's Farm Business Income report, as well as industry bodies, academics and publications.

Covering 90% of the farmed area in England via a stratified sample of 2.5% of farms, circa 1750 farms take part each year with the longest running farm having participated for 36 years. Benefits of participation include free management accounts, benchmarking and £600 of farm-specific accounting software based on Xero.

Currently the sample is approximately 20 pig farms short, mostly in the North and East of England, due to high numbers exiting pig farming (for reasons we are all familiar with!), making the sample unrepresentative of the sector.

If you would like to help, a sign-up form can be found at www.farminfo.co.uk and following submission, an interested farm would be assigned to a dedicated research officer. Research officers visit annually at the financial year end although if records are digital it is possible to fulfil the survey online or via telephone if desired.

Staff Update

..... and finally, **huge congratulations to Laura Law** for passing her AMTRA exams.



Laura is the newest member of our pharmacy department and her hard work has paid off. Laura joins a highly qualified and experienced team who are always on hand to dispense, advise and help you all with your medicine requirements.

Well done, Laura!

Activist Activity Update –

Get Your Signage Right!

Animal Rising have issued a statement that they are going to be the most active they have ever been, and are planning to 'save' animals from some intensive farms.

If a farm doesn't have signage displayed at primary points of entry, police will treat it as trespass i.e., *a civil offence* and *not aggravated trespass*, which is a *criminal offence* (section 68).

Signage should state that the unit is private property and with no unauthorised access.

The wording is essential – 'aggravated trespass is unlawful'.