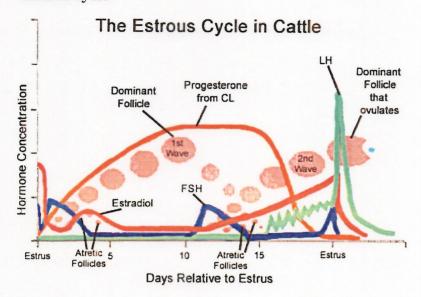
[Female reproductive system 4]

<Estrus cycle>



This cartoon is hormonal change in ovary. I explain about significant three points.

First, follicle growth consists of two waves. (in the case of milking cow) Second, follicle doesn't ovulate on 1st wave because ovary has corpus luteum. Ovulation depends on progesterone from corpus luteum. The corpus luteum is regressed by PGF2  $\alpha$  and then dominant follicle ovulates in second wave.

Third, dominant follicle grow up and it secrets estradiol. Then GnRH surge →LH surge (heat)→ovulation. Please understand this flow.

Important point I want to make here is that we can manipulate it by exogenous hormones.

## <What is Heat?>

Heat (= estrus) is a period of time in which a female displays interest in mating. At the time of heat there are behavioral signs and changes in the external genitalia. The most important sign is standing. Standing is primary sign of heat cow. The others are secondary signs of heat.

- Standing, mounting
- Mucous discharge from vagina
- Swelling/edema on vagina
- Bark(vocal), butting, walk around(roam), follow behind, chin-resting

Yusuke IWASAWA