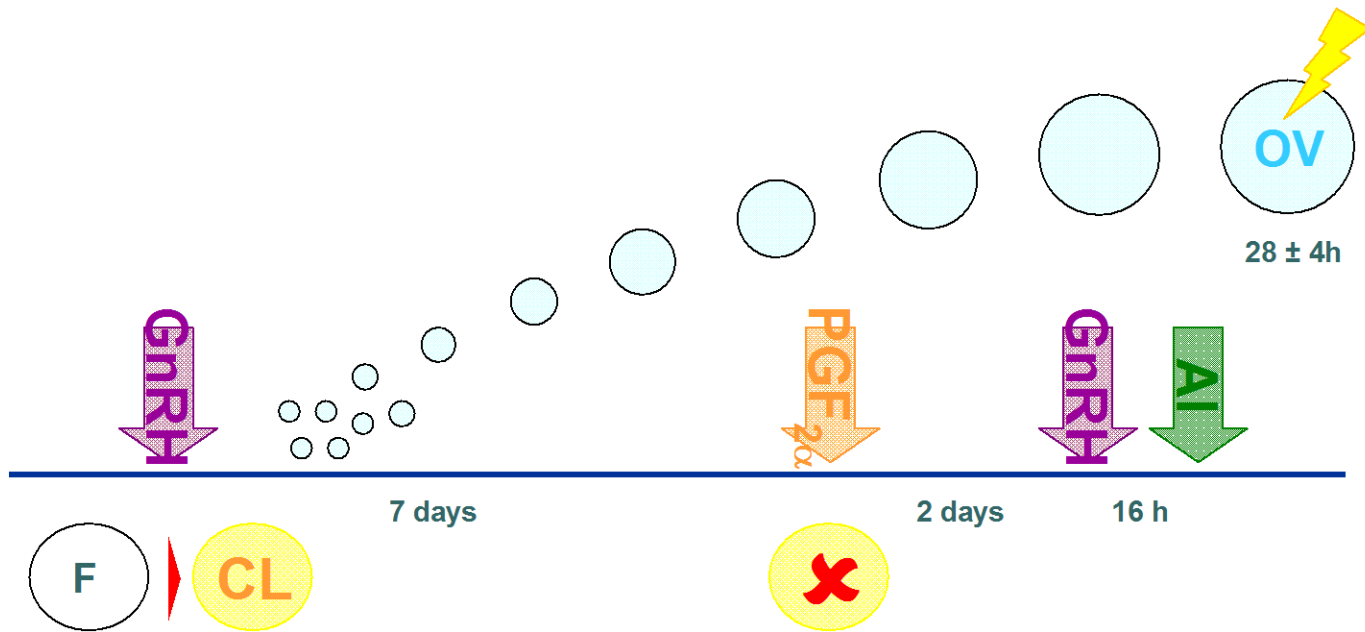


Real World review of the Estrous Cycle and the Application of Synchronization Programs to Benefit your Dairy

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Ovsynch:



Adapted from Pursley et al. 1995

Injecting 1st GnRH

Days 1 – 3

- **GnRH will not ovulate the largest functional follicle.**
- **Cycle will proceed normally. Wasted Shot**

7 Days after GnRH (day 10 of the estrous cycle)

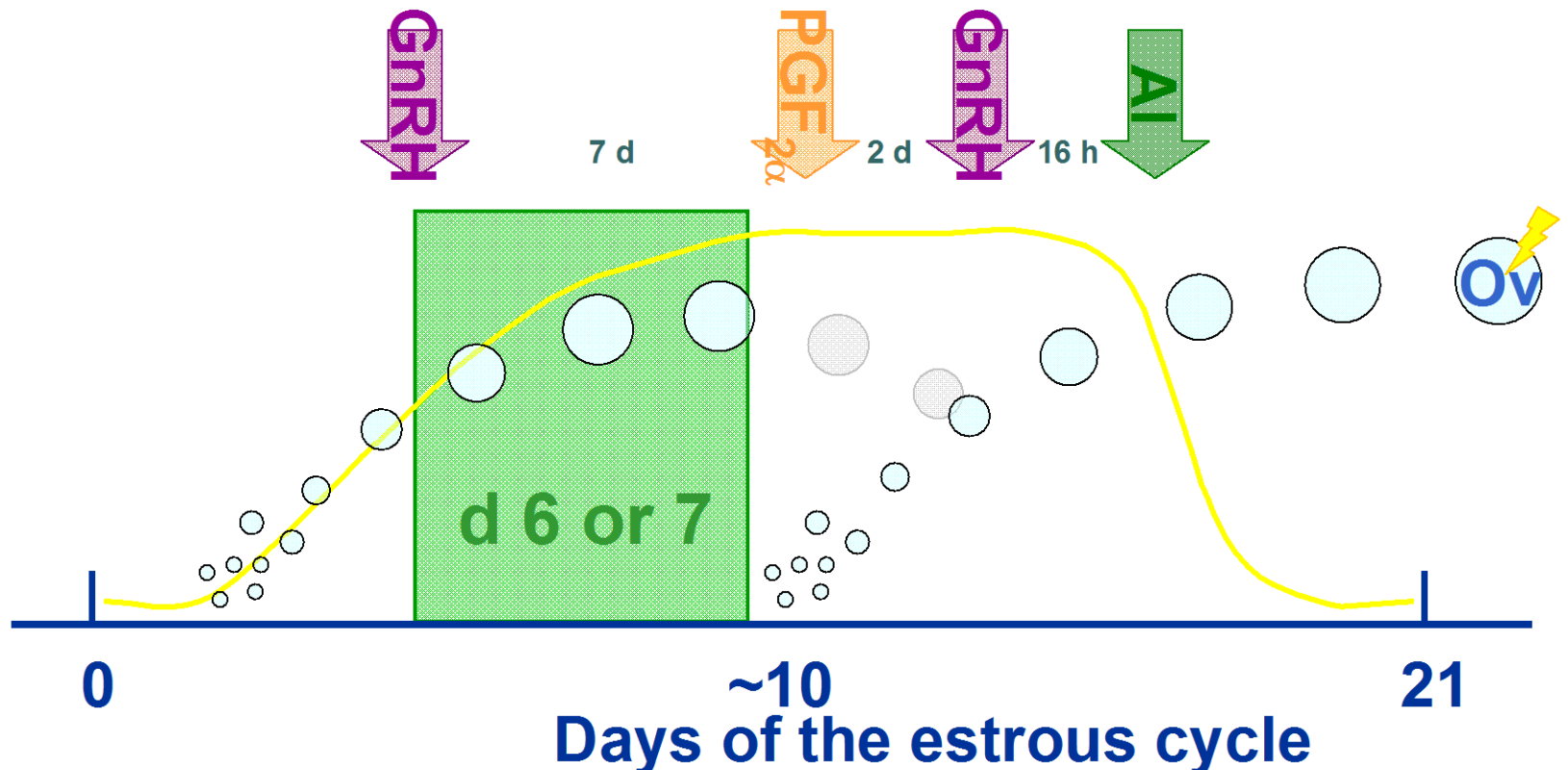
- CL responsive to PG shot.
- Subsequent regression of CL

Day of 2nd GnRH

- **GnRH induced LH surge will ovulate the dominant follicle 24 to 32 h later.**
- **Generally only about 1/3 of cows will show signs of estrus.**
- **Time inseminate based on injections – not estrus**

Ovsynch in the estrous cycle

Optimal scenario



Adapted from Vasconcelos et al. 1999; Moreira et al. 200

Ovsynch d 14 of estrous cycle

- If starting Ovsynch on day 14 of cycle stimulate lysing of the CL prior to the PG shot
- Cows seen coming into heat around time of PG shot

Estrous Synchronization

- Current research would suggest that standard ovsynch does not have as high a rate of synchronization of cows as previously thought
- G-6-G protocol and Double Ovsynch have been shown to have a higher rate of synchronization relative to standard ovsynch and Pre-synch alone

Follicular Cysts

- **Dominating effects of cyst suppress the growth and development of other follicles.**
- **These cows are anovular and poor cycling**
- **Best option for these is giving GnRH and starting Ovsynch the following week (G-G-P-G)**

Double PG

- Giving 2 PG shots 12 – 24 hrs apart may increase regression of the CL, increasing conception rates.
- This mimics the PG pulses that happen naturally during the estrous cycle

Resynching Cows

- For cows that have a CL on open check may want to use a G-6-G protocol.
- This protocol has a significantly higher rate of synchronization for Timed AI especially on re-synchs

Timing of AI

- Sperm require ~ 8 hrs for capacitation prior to fertilization of the egg
- Ideal timing of insemination is 16 hrs post 2nd GnRH injection as this would allow for fully capable sperm to be available for fertilization upon ovulation of the dominant follicle (ovulation generally occurs 24 hrs post GnRH induced LH surge)
- Insemination ~ 8 hrs post 2nd GnRH has been shown to have roughly 4% lower conception rates.
- First service prior to 70 – 75 DIM may have reduced CR's due to subclinical uterus infections, unstable cyclicity, etc.

Influence of Semen Quality and Location of Insemination

- Using higher Sire Conception Rate (SCR) bulls can significantly influence conception rates
- Deposition of semen within the deep horn has shown significant improvement on CR's
 - 50% deep horn vs 35% body of uterus