

Estrous Synchronization (Ovulation Induction)

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Learning Objective

To understand how estrus and ovulation manipulation work.

The exact protocols were covered in lab and will not be repeated in this lecture.

Details beyond this lecture are provided for you in the on-line lecture outline for your personal information only!

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Estrus synchronization:

Why?

1. Group females for parturition:
 - a. ↓ Labor, ↓ Calving period **Reduce calving season**
 - b. More uniform weaning weights.
2. Reduce or eliminate estrus detection.
3. Needed for artificial insemination:

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Cattle

- Prostaglandins - **Regression of CL**
 - » Lutalyse, estrumate
- Progestins - **Prevents estrus and ovulation**
 - » CIDR, MGA
 - » Combined with prostaglandins
- GnRH - **Ovulation, terminate follicular wave**
 - » Combined with prostaglandins in Ovsynch

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Sheep

- Progestin
 - » CIDR, vaginal pessary (sponge)
 - » In season - works alone
 - » Out of season - requires eCG
- Prostaglandin
 - » Lutalyse, estrumate
 - » Only works in season
- Lights - **decrease day length**
- Melatonin - **give orally or IM**

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Swine

- Prostaglandin
 - » Not of practical use (only effect days 12 - 17)
- Progestins - **Altrenogest (Regumate)**
 - » MGA causes ovarian cysts
 - » Regumate (oral) for 18 days
 - Cost is \$5 - \$10/day
- Wean Piglets
- Puberty Induction - PG600

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Equine

- **Prostaglandin**
 - » Lutalyse - similar usage as cow
 - » Mare CL more sensitive than cow's
 - » Only effective in season
- **Progestins**
 - » Regumate
 - » Reduce estrus behavior in competition animals
 - » Only effective in season
- **Light**
 - » 16 hrs day light for 60 - 90 days.

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