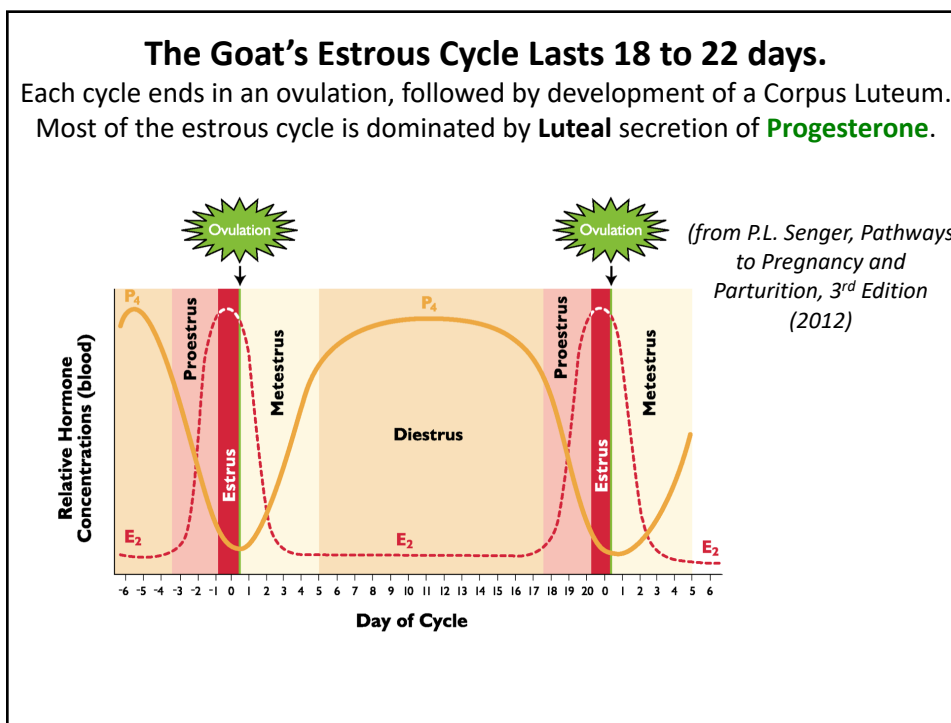


Goat non-surgical AI Workshop

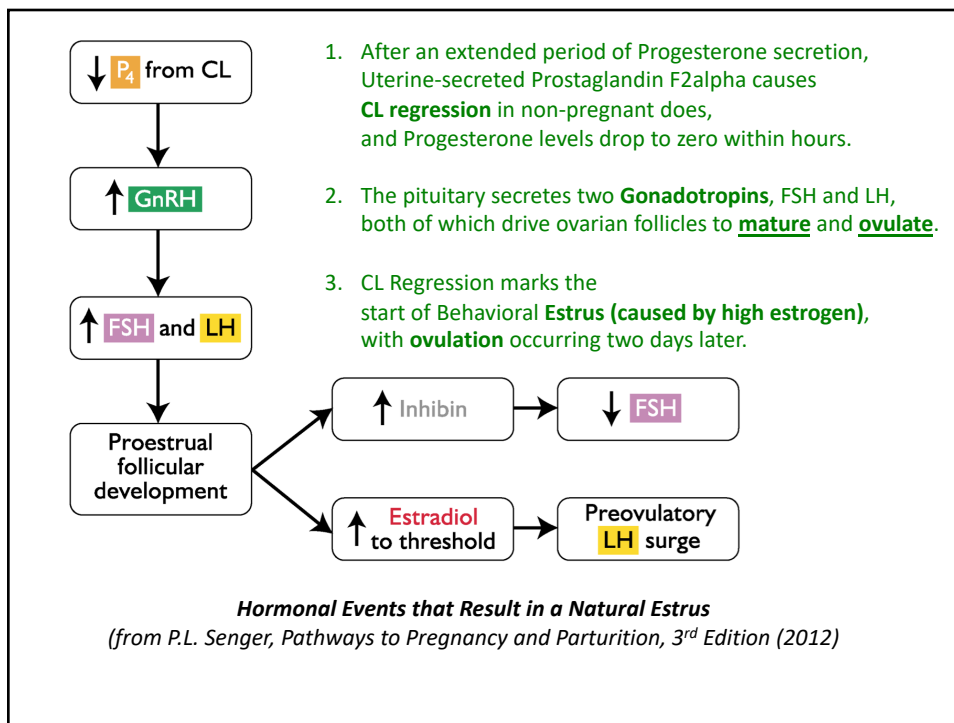
Synchronizing the timing of AI by manipulating the doe's estrous cycle

Jim Weber PhD, DVM
 Associate Professor
 School of Food & Agriculture
 Attending Veterinarian
 University of Maine
 jaweber@maine.edu

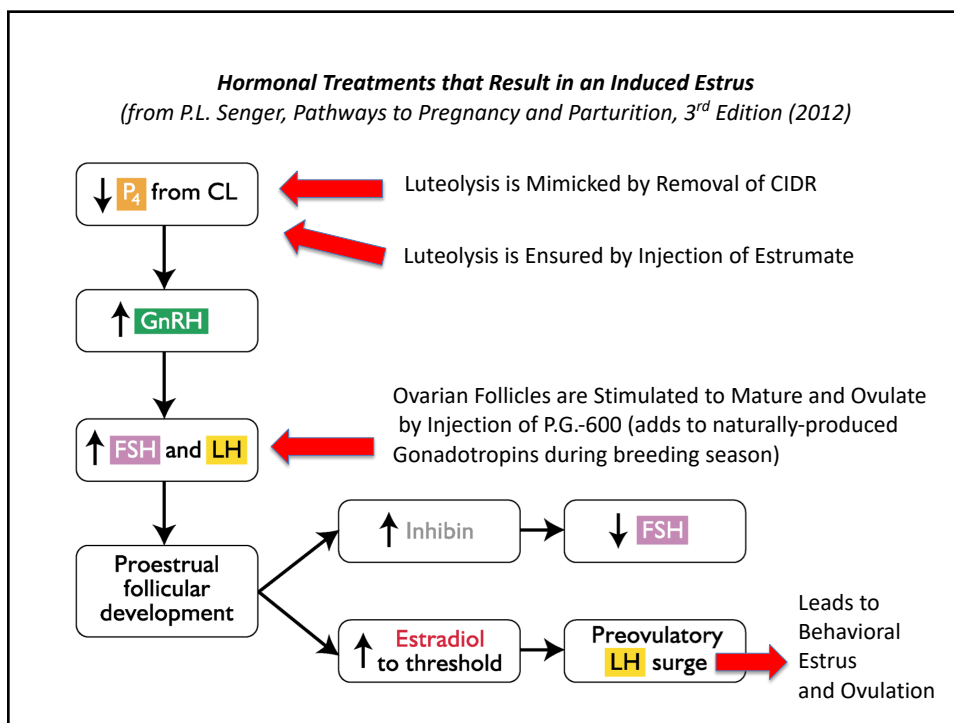
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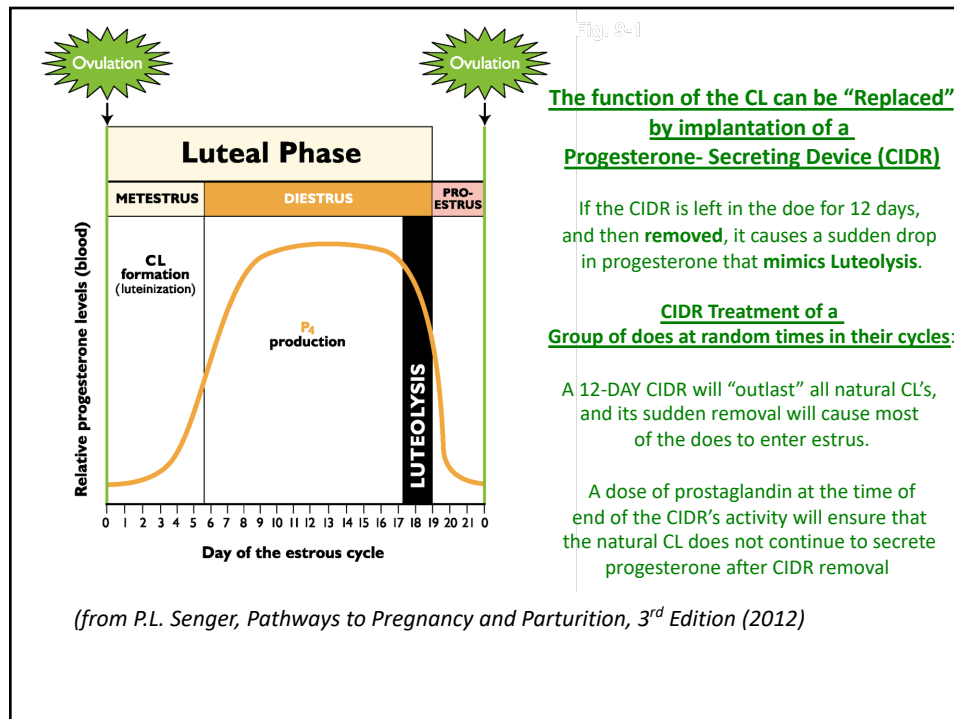
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Applied Reproduction in Goats

Note that these instructions apply only to does being bred during their natural breeding season in the fall

- Does are SHORT-DAY seasonal breeders, (repeating 18 to 22--day estrous cycles in the Fall)
- 12-day CIDR treatment of randomly ovulating does causes most of them to display behavioral estrus within 24 hours after removal of CIDR
- Prostaglandin, gonadotropin treatments at CIDR removal **may** increase synchronization rates
- Estrus lasts for 24 to 36 hours
- **CIDR-Induced ovulation** occurs one to two days after CIDR removal, toward the end of estrus

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Doe-related AI equipment



Day zero: insert CIDR into vagina
 Day 12: Remove CIDR.
 Also on Day 12:
 inject 1 cc of Estrumate i.m.
 (note that Estrumate is a
 prescription drug)
 (administration of gonadotropins?)
 Day 13: Most does start showing heat
 Day 14: Continued heat signs
 followed closely by ovulation.

200 million sperm in ½ cc straw

Insemination "Pipette"

Single-use AI sheath



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Implications of Reproductive Drug Use

FARAD (Food Animal Residue Avoidance Database)

- **Eazi-Breed CIDR** – Non-Prescription, approved for use in sheep (no meat or milk withdrawal period).
(CIDR's are not approved by the FDA for use in goats)
- **Estrumate** – Prescription drug, not approved for use in goats. Use in goats requires "Extra-Label Use" authorization from Veterinarian
- **P.G.-600** (source of gonadotropins that mimic FSH and LH hormone effects)
 Non-Prescription, but also not approved for use in goats. Also requires Extra-Label authorization, but producers can obtain P.G.-600 without a vet (?).

Producers who use non-prescription drugs in unapproved species are still responsible for illegal residues in their food products

When requested to provide a withdrawal time for reproductive use of these drugs in goats, FARAD would not quote a withdrawal time.

"AMDUCA permits extra label drug use for therapeutic purposes only and to alleviate pain and suffering. The extra label use of medications for reproduction management would not be considered therapeutic and thus not permitted."

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**Vaginal AI using non-surgical AI
in Maine - Results from 4 farms in 2016**

Icelandic Breed

- One ram was used to inseminate 14 ewes on three farms
- Semen was transported to farms up to 90 minutes away
- **Chilled semen** VAI resulted in 86% pregnancy rate when inseminated between 1 and 24 hours post-collection

East Friesian Dairy Breed

- My home farm
- Two rams were used to inseminate 17 synchronized ewes at 1 to 14 hours post-collection
- Overall pregnancy rate was **100%** (17 / 17 ewes)
- Nearly all of the pregnancies were twins or triplets

**Work with frozen semen in sheep breeds
has achieved pregnancy rates between 20% and 50%**