



Extension
UNIVERSITY OF WISCONSIN-MADISON

DAIRY WORKERS'

TRAINING MODULE **2**

REPRODUCTIVE SKILLS

Heat Detection and Heat Detection Aids



Heat detection

The most limiting factor in reproductive management on farm



Heat Detection

Heat Detection

- Time needed depends on system selected
- Many females exhibit heat at the same time



Photo credit from Paul Fricke



Early signs of estrus

- Increased locomotion - restless
- Increased vocalization - bellowing
- Nervousness
- Attempts to mount other animals
- Very small amount of watery mucus

Not receptive to the bull at this point



Signs of heat

- Primary sign:
 - Stands to be mounted
- Secondary signs:
 - Friendly
 - Does not eat
 - Abundant sticky clear mucus
 - Vulva lips red and swollen



Post estrus

- Will not stand to be mounted
- Will mount other animals
- Dirty flank
- Rough filled tail head
- Bloody discharge



Length of cycle and estrus

Heifers

- Average 17 to 21-day estrous cycle
- Longer duration of estrus activity

Cows

- Average 18 to 26-day estrous cycle
- Shorter duration of estrus activity



Dirt vs. concrete

- Dirt lots provide for better footing
- Concrete can be slippery
- Ice can also be of concern



Seasonal effects of estrus behavior

Breed	Number of Standing Events	
	Winter	Summer
Holstein	8.6	4.5
Jersey	12.1	5.3

Nebel et al., J Dairy Sci 80; 1997



When to detect estrus

Occurrence of cow's standing events:

- 70%: 6 pm - 6 am
- 22%: 6 am - noon
- 8%: Noon - 6 pm

Observe twice a day for 30 min

- Early in the morning
- Late at night



Tips to increase success

- Assign 1 person
- Clearly identify animals
- Know signs of estrus
- Record all estrus dates
- Schedule adequate time for observation



When to inseminate:

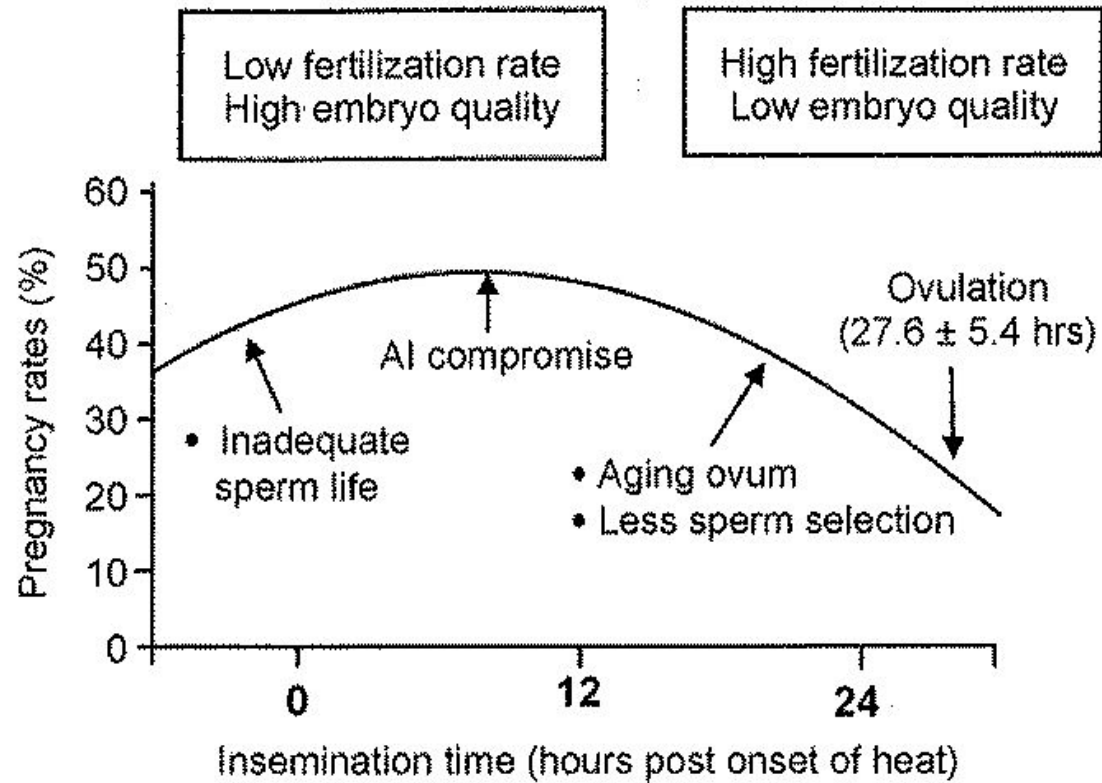


Photo from ANSC405 Olds Canada Course



When to inseminate:

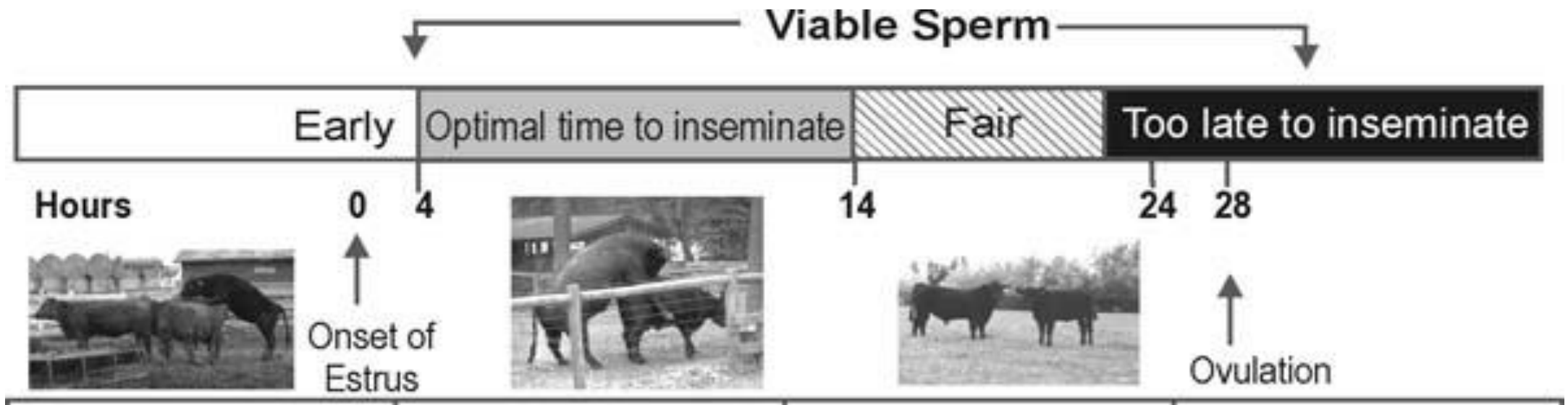


Photo from ANSC405 Olds Canada Course



Estrus Detection Aids

Tail paint



Photo credit: J. Keuning



Photo from gea.com



Tail chalk



Application



Before



After

Photo from Katie Pfeiffer

Pressure activated devices

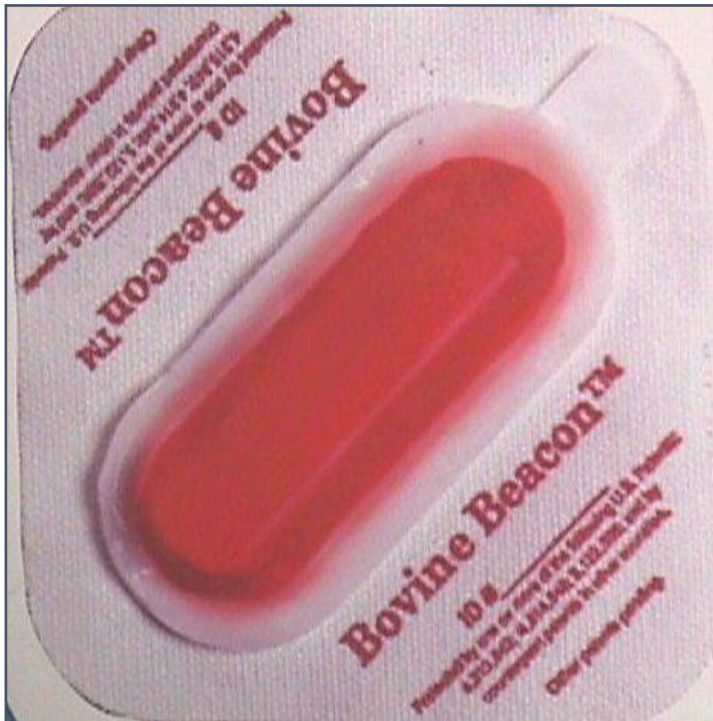


Photo from Katie Pfeiffer



Rub-off patches



Photo credit: H. Schlessler

Computerized Systems

- Examples:
 - Pedometers
 - Ear Tags
- Require computer and internet

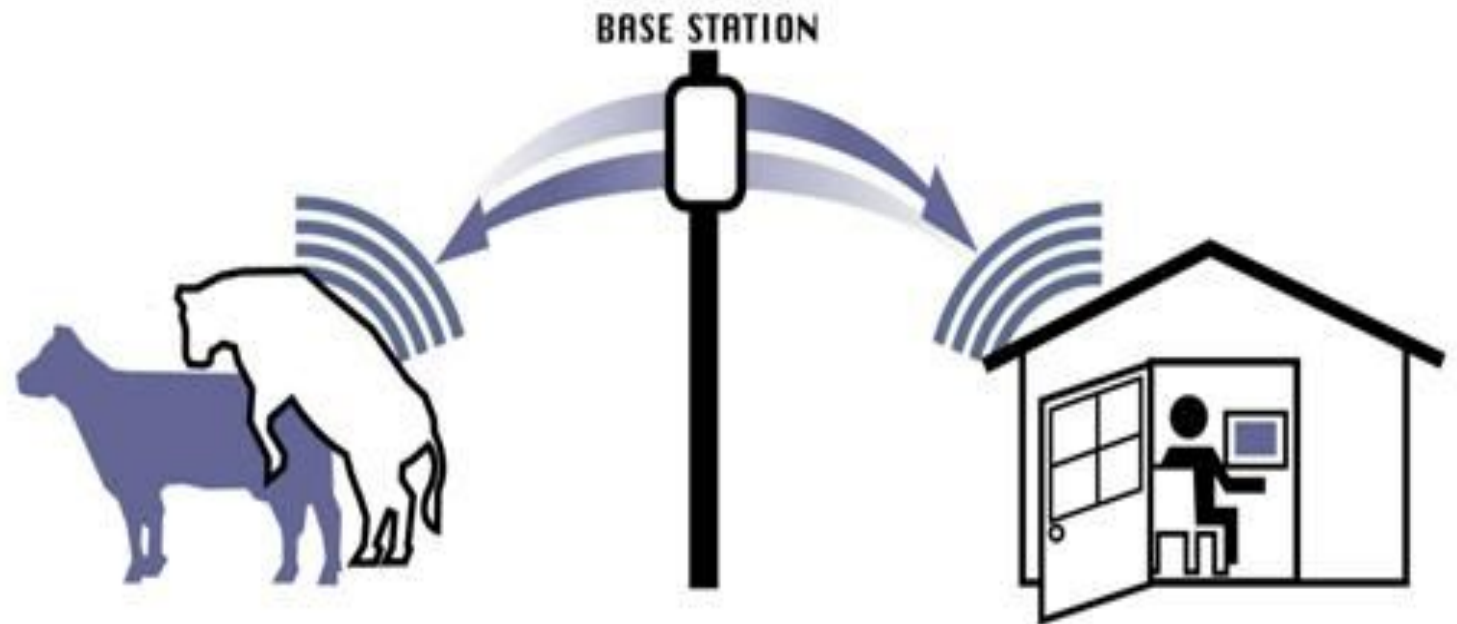


Photo from cowchips.com



Summary

- Heat detect is important for a successful breeding program
- Know the signs of heat
- Breed when you see standing heat
- Utilize heat detection aids to increase success of heat detection



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Thank you to the following individuals for use of slides and providing review:

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Sandy Stuttgen | Extension Agriculture Educator | Taylor County

Resources:

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