

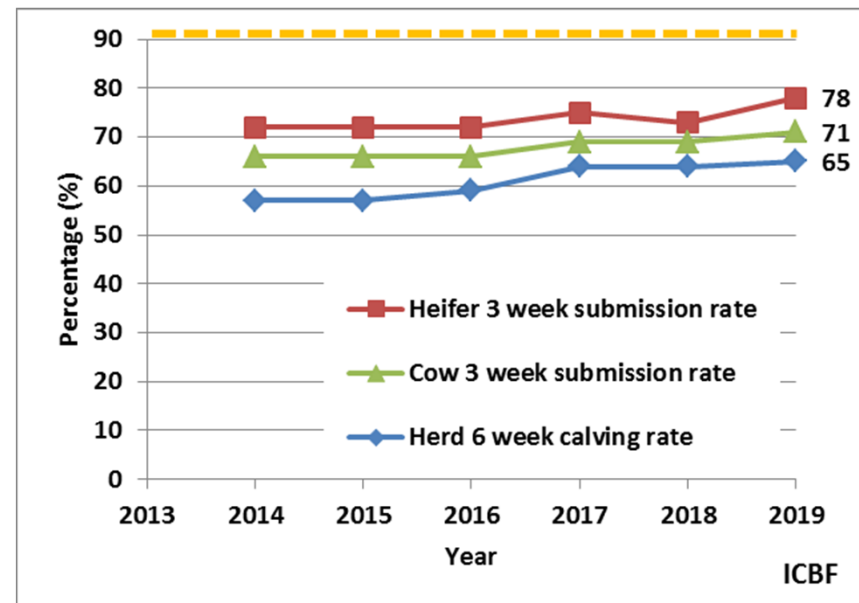


Maximising in-calf rates during the first three weeks of the breeding season

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Teagasc Moorepark

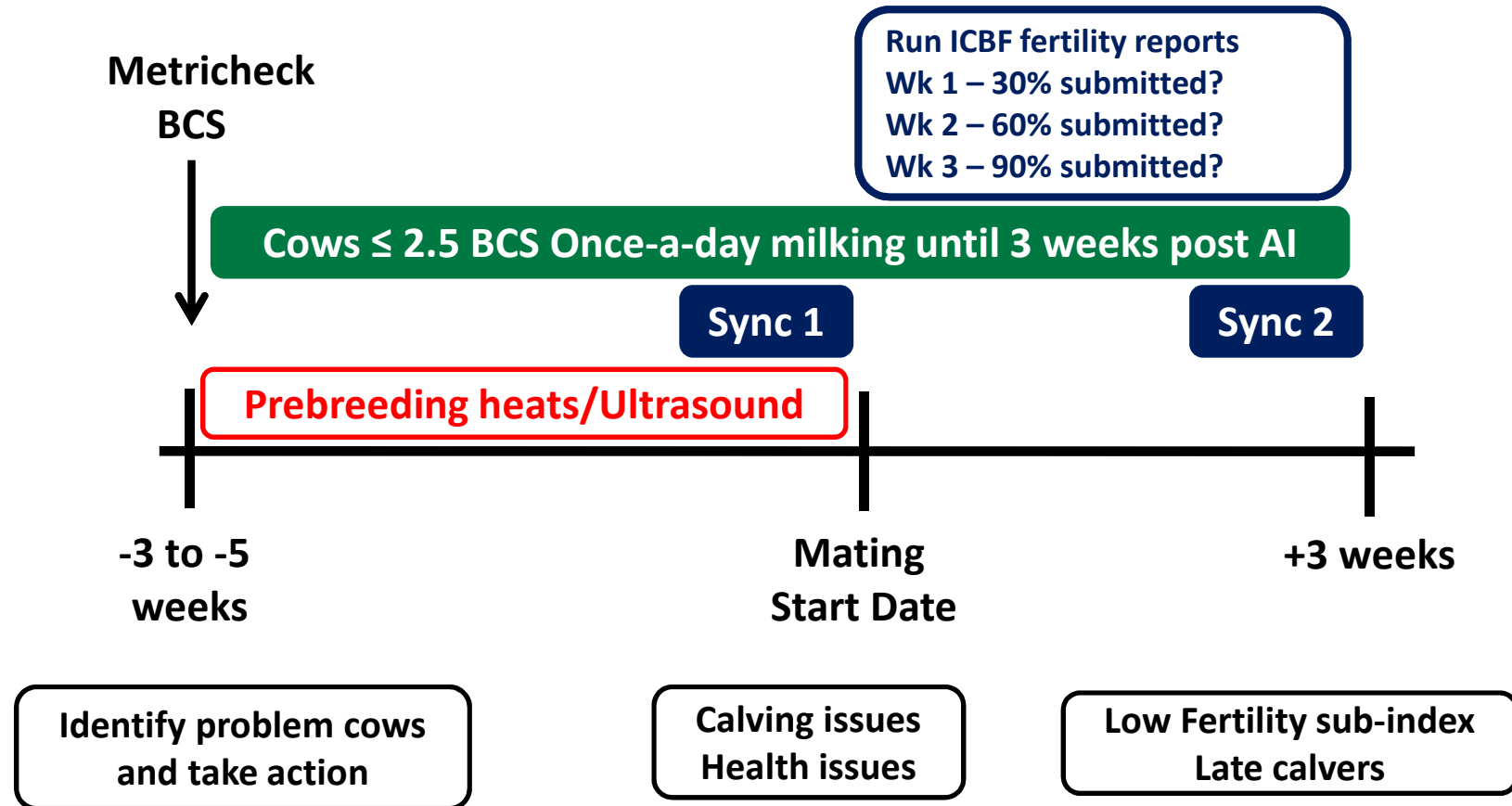
Reproductive Performance Indicators

- 3 week submission rate target **90%**
- 6 week calving rate target **90%**
- Compact calving, long lactations → high milk production
- Average herd
 - 71% 3 wk cow submission rate
 - 78% 3 wk heifer submission rate
 - 65% six week calving rate
 - **€206** less profit per cow per year

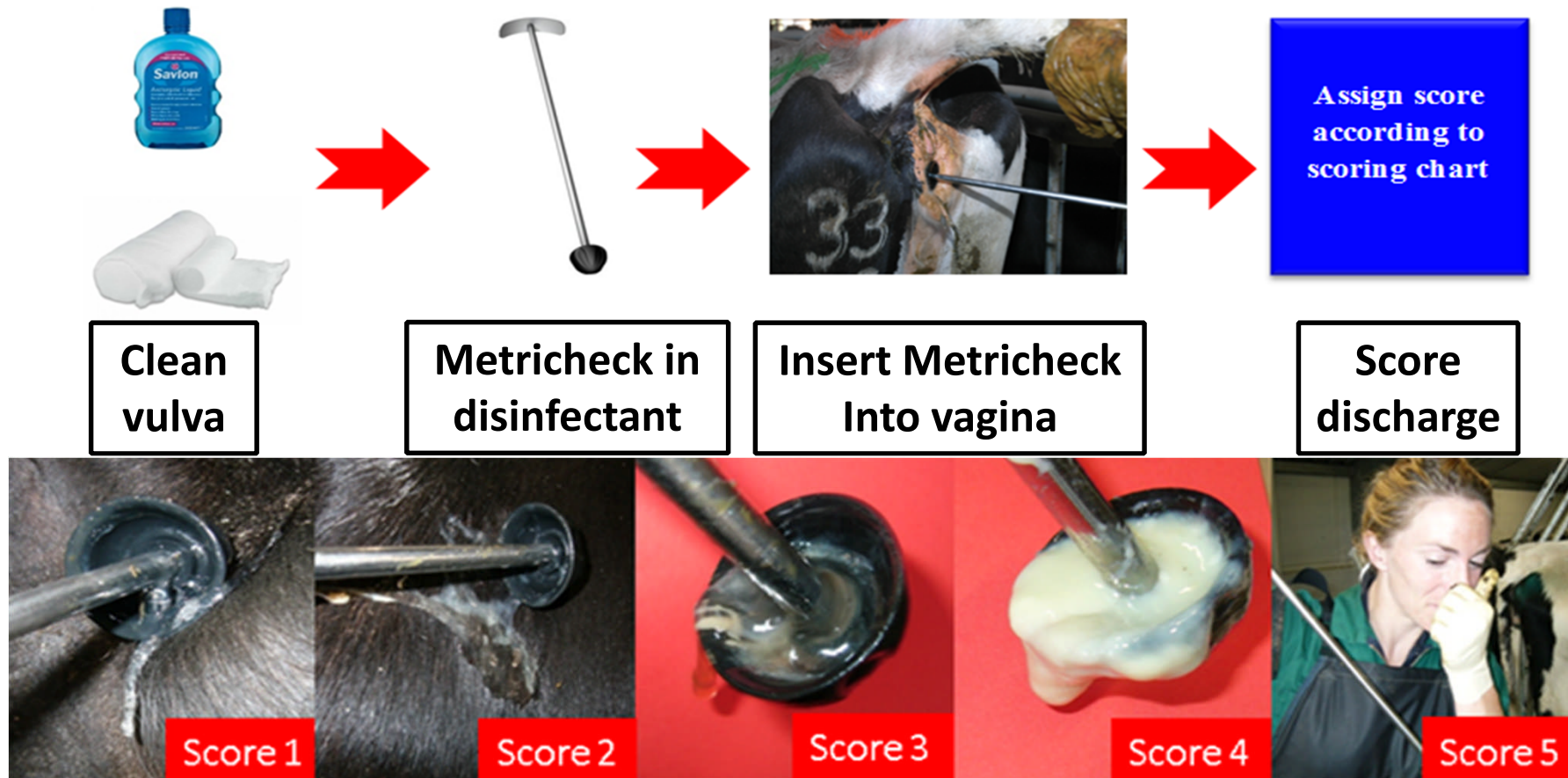


Actions to maximise 3-week in-calf rate

- Non-cyclers and poor heat detection • Uterine disease ↓ conception rate
↓ submission rate



Identify Uterine Infections with Metrichheck

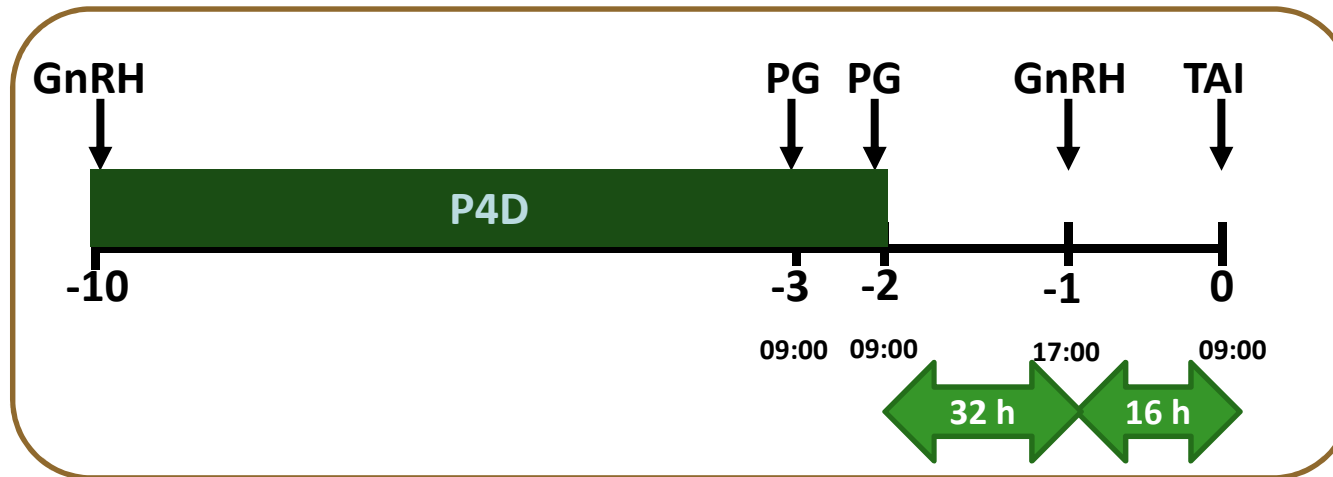


1. Clear mucus with no pus
2. mucus with flecks of pus
3. mucus with < 50% pus
4. mucus containing $\geq 50\%$ pus
5. mucus containing $\geq 50\%$ pus and odour

Metricure Intrauterine Antibiotic

Cow Timed AI (TAI)

- ✓ Promotes cyclicity in cows that are not yet cycling (should be >30 DIM at start of synch)
- ✓ AI at fixed time, regardless of signs of heat



5 interventions
4 injections, 1 P4D
None in heat before sch. TAI

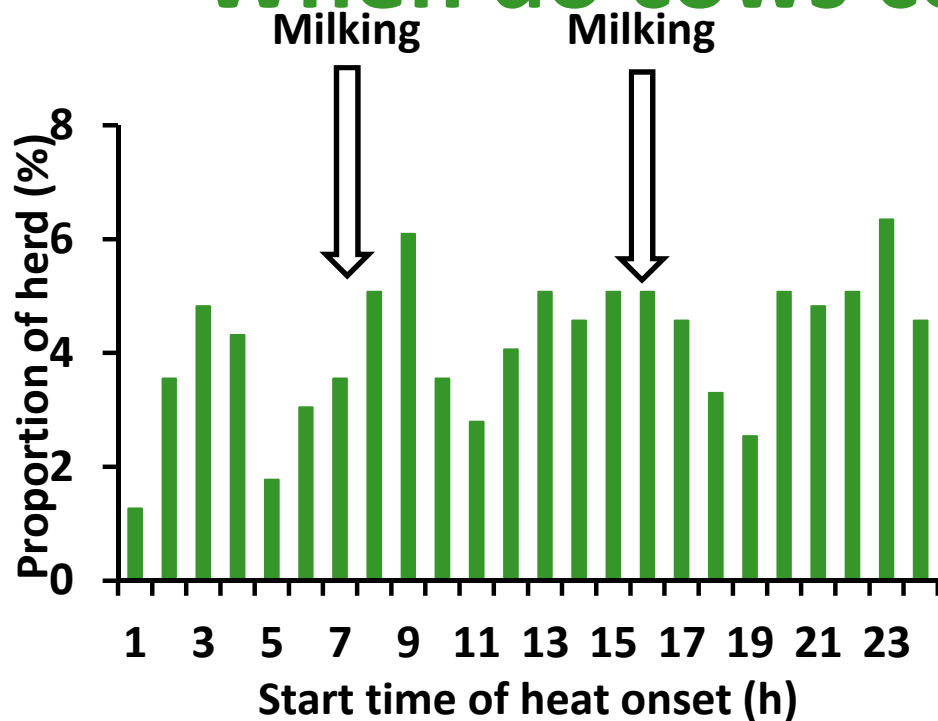
GnRH: Gonadotropin releasing hormone (e.g., Ovarelin, Receptal)

PG: Prostaglandin F2α (e.g., Enzaprost, Estrumate, Lutalyse)

P4D: Progesterone device (e.g., CIDR, PRID)

TAI: Timed artificial insemination

When do cows come into heat?



- On average, in heat for 8 h
- 55% of cows received mounts for ≤ 8 h
- ➔ ≥ 3 periods of heat detection daily
- ➔ need heat detection aid
- Late calving cows have shorter heats

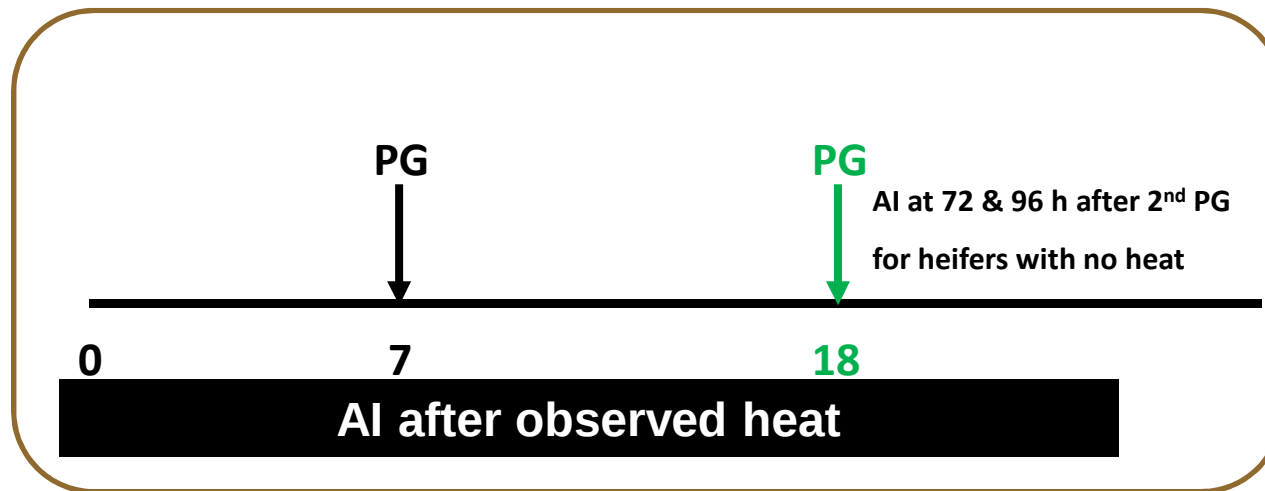


Breeding of heifers

- **Breed start of breeding season**
- **Critical to compact breeding, calving, herd survival**
- **Highest EBI stock**
 - Target dairy replacements
- **Highest fertility females**
 - Best pregnancy rates with sexed semen
- **Can reduce labour requirements**

Heifer Synchronisation with Prostaglandin

- ✓ Heifers must be cycling
- ✓ Use heat detection aids combined with periods of observation

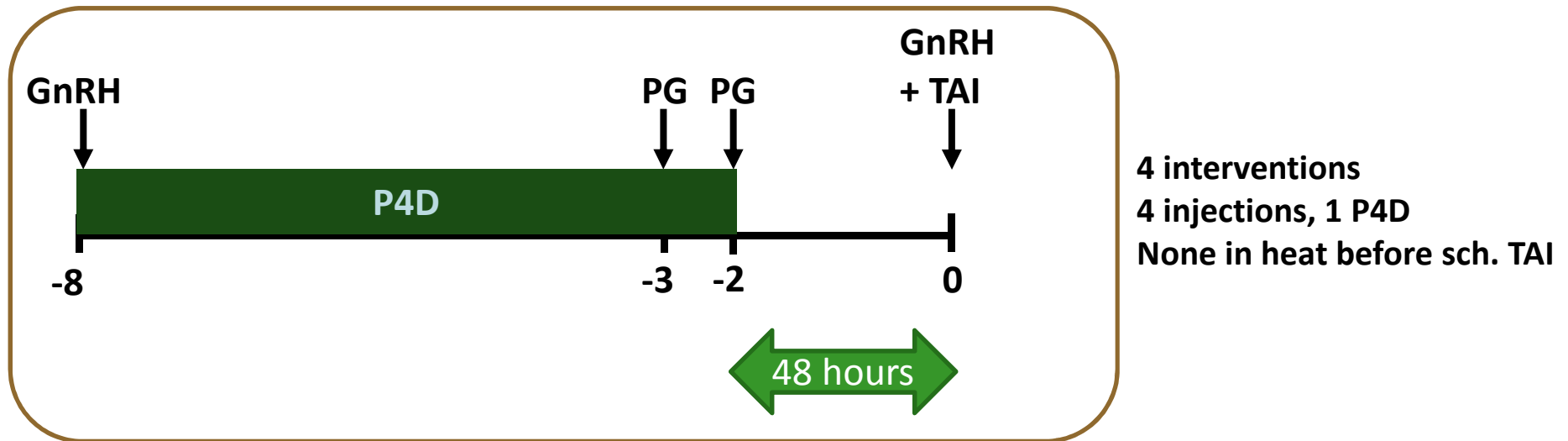


- $\sim \frac{1}{3}$ heifers get no PG
- $\sim \frac{2}{3}$ heifers get 1st PG
- $< \frac{1}{10}$ heifers get 2nd PG
- AI occurs over 21 days
- Most bred by day 10

PG: Prostaglandin F2 α (e.g., Enzaprost, Estrumate, Lutalyse)

Heifer Timed AI (TAI)

- ✓ Promotes cyclicity in heifers that are not yet cycling (should be close to target BW)
- ✓ AI at fixed time, regardless of signs of heat



GnRH: Gonadotropin releasing hormone (e.g., Ovarelin, Receptal)

PG: Prostaglandin F2α (e.g., Enzaprost, Estrumate, Lutalyse)

P4D: Progesterone device (e.g., CIDR, PRID)

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Key points to take-home

- Use high EBI cows and heifers to breed next generation
- Metrichick ➔ cows with uterine infections
 - Treat infected cows 3 to 5 weeks before MSD
- Body condition score ➔ thin cows ≤ 2.5 BCS
 - Once-a-day milking until 3 weeks post AI
- Tail paint/activity monitor/Ultrasound scan ➔ non-cyclers
 - Synchronise to increase pregnancy rates
- Heifer synchronisation recommended
- Three periods of heat detection + heat detection aid