



**AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY**

The Irish Agriculture and Food Development Authority

# Maximising Mare Fertility – Laying the Foundations

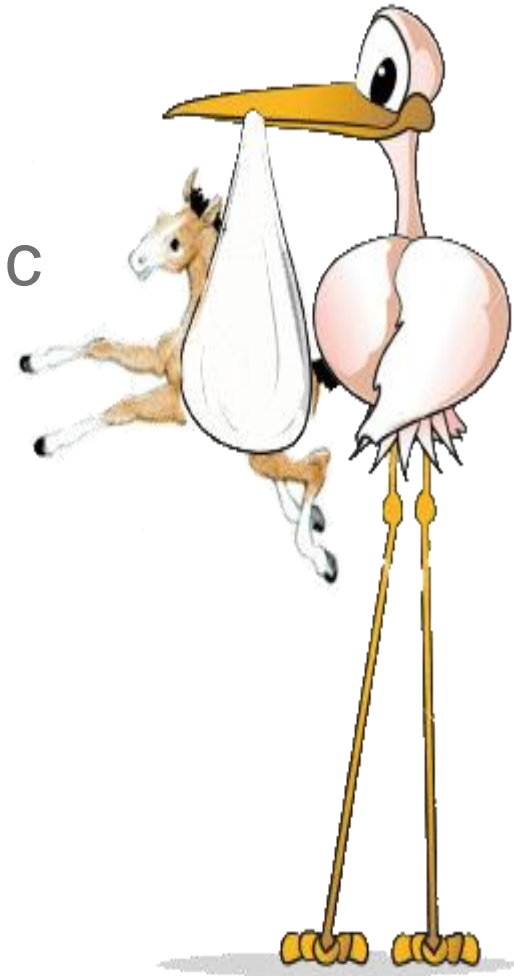


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# What is Infertility?

- No Cycle/ Abnormal Cycle
- Cycles, but doesn't conceive
- Cycles, conveys, but early embryonic death/ abortion
  
- Fertile Mare – 3 cycles - pregnant
  - Breeding method ?
- Barren after 3 cycles

**Why?**



# Infertility

- Identifiable reasons?  
*Or*
- Complex and multi faceted?

Sometimes difficult to decipher what the underlying cause is

# Age – old mares 18 years +

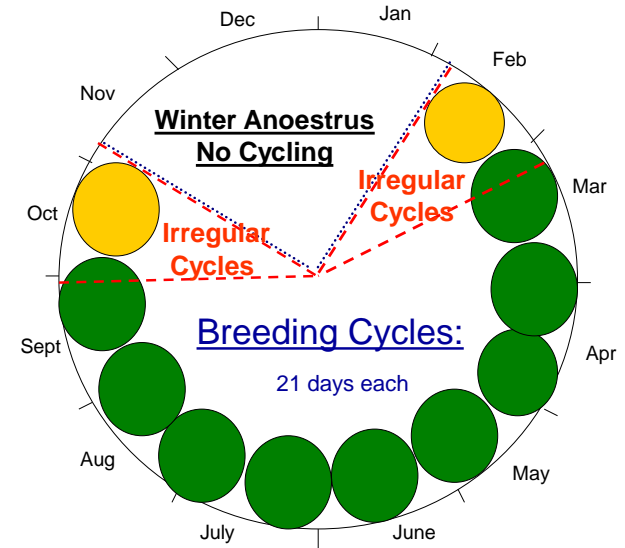
- Difficulties conceiving and carrying foal to term
  - Wear and tear on uterus – scar tissue
    - Hormone release; implantation
  - Egg quality decline
  - Ovarian failure (20yrs +)
  - Reproductive conformation-related problems
    - Urine pooling; Fluid Retention

# General Health – ability to conceive, carry, & give birth to healthy foal

- Exercise – critical!
- Conformation Flaws – pelvis/ croup
- Vaccination
  - Flu; Tetanus; E.H.V.
- Parasite control – impacts general health & diet efficiency

# The *Right Time?* - Seasonality

- Spring transitional breeding
  - Erratic cycling
  - Wait for regularity



- Artificial Lighting (early season breeding) –
  - G. Body Condition; Housed; Rugs?
  - 8-10 weeks - 16 hrs stimulus

# The *Right Time?* - Cycle

- Ovulated eggs - viable 24 - 48 hours (6 hours)
- Semen viability highly variable (hours to days)
- Optimal outcome – involve your vet!
  - Viable sperm & egg present together!
  - Aim to breed once per cycle
    - Teasing & Vet

# Body Condition / Nutrition - Influences

- Conception
- Early embryonic loss / abortion
- Ability to recover from foaling and conceive again
  - Growth and soundness of the foal
- If diet isn't meeting energy demands...
  - First to decline.... **Ovulation & Fertility**
  - Then ..... Milk Production
  - Then .... Weight Loss

# Diet Content

- Seasonal timing of mating / foaling
  - availability & quality of pasture / forage
- Barren/ maiden – rising plane of nutrition
- No forage alone meets mineral & vitamin requirements of last trimester pregnancy/ lactation
- Body condition rules
  - Increase B.C./ poor doer - Stud cube/mix; oil; straight & balancer
  - Maintain B.C./ Good doer - balancer

# Breeding Unsoundness –

## contamination & infection of the repro tract

- ***Uterine infections can:***
  - ***prevent a pregnancy***
  - ***cause loss of a pregnancy***

### ***Sources of Infection:***

- ***Uterine infections undetected before breeding***
- ***Systemic infections spread to the placenta***
- ***Infections enter through the vulva and cervix***
  - ***Foaling/ Pneumovagina/ Unhygienic handling***

# Breeding Unsoundness – contamination & infection of the repro tract

- PNEUMOVAGINA
- Aspiration of contaminants into the vagina (note B.C.)
  - Predisposes to inflammation and ascending infections
    - cervix and uterus
  - Readily treatable with Caslicks



# Breeding Unsoundness –

## contamination & infection of the repro tract

- C.E.M.; E.V.A.; E.I.A
- Uterine swab
- Uterine fluid; cysts; urine; inflammation
- Clearance post breeding contamination < 48 hours
- Manage susceptible mares
  - Uterine lavage; antibiotics/mucolytics; oxytocin
    - up to two hours before mating
    - from six hours after mating

# Breeding Unsoundness – malfunctioning of the hormonal system

- Closely linked ‘feedback’ system between many reproductive hormones
  - controlling affect production/release of others
- Correct timing of secretion & appropriate levels of all hormones required (conception and pregnancy)
- Subfertile mares due to hormonal imbalance
  - Identified and dealt with - vet

# Twin Pregnancies

- Undesirable – abortion usual outcome, often late in gestation
- Higher incidence fertility problems following abortion
- Higher incidence retained placenta with aborted twins
- Dystocia common
- Scan 14 days after ovulation
  - ensure reduction to single pregnancy

# Maximising Fertility

- Ensure good general health and minimal stress
  - Daily exercise & routine
- Aim to breed from mares <18 years
- Cycle patterns repeat – good records
- Consider all the challenges/ inputs to early season breeding
- Optimise nutrition and exercise – maintain g. B.C.
- Clinical examination to ensure freedom from infection; cysts; fluid; urine pooling; plan mating time

# Maximising Fertility

- Address pnueumovagina
- Treat hormonal deficiencies where present
- Manage mares to minimise persistence of endometritis after mating
- Reduce twin pregnancies
- Keep pregnant mares separated from other 'classes' of stock to prevent disease transmission that could compromise a pregnancy

# Stating the obvious?

Sometimes nothing is as invisible as the obvious



## LOOK FOR SIGNS

Don't ignore the obvious pointers in life.

When it is obvious that the goals cannot be reached, don't adjust the goals, adjust the action steps.

- Confucius

But .. there does come a point of 'opting out' where infertility is concerned



**Thank You**