

1 **Preparing Your Mare for Breeding**

Dr. John Henton
University of Tennessee
College of Veterinary Medicine

2 **Review of Basic Reproductive Physiology**

3 **Seasonal Effects on Mares**

Seasonally polyestrous

- **Winter Anestrous**
 - 50-150 days
 - **Affected by geographic latitude**
 - **Inactive ovaries**
 - **Cervix relaxed & pale**
 - **Mare reacts indifferently to stallion**

4 **Seasonal Effects**

- **Spring Transition**
 - **Estrus without ovulation**
 - **Estrus activity erratic**
 - **Longs period of estrus without ovulation**
 - **Hormonal activity erratic**
 - **High levels of FSH**
 - **Low levels of LH**

5 **Physiologic Breeding Season**

- **April – September**
- **95% of mares have normal cycles and ovulate**
- **Hormonal events are very predictable**
- **Fertility is highest potential**

6 **Fall Transition**

- **Extended cycles**
- **Large non-ovulatory follicles**
 - **“Autumn Follicles”**

7 **Operational**

Breeding Season

- Traditional
 - February – June
- Tennessee Walking Horse
 - Year around except two weeks around “The Celebration”

8 Photoperiod Management

- Artificial light at end of day:
 - Start mid November - early December
 - 16 hours
 - 200 watt bulb

9 Photoperiod Management

- 35 days starts cyclicity from anestrus
 - Still has transitional period
 - Increases effectiveness of other treatments
 - Drugs
 - PGF₂ , Progesterone, etc
 - Not proven as effective to lengthen Fall Breeding season

10 General Comments

on Mare Management

Maiden Mare: Mare which has never foaled

- What was her job?
- Why is she now a brood mare?
- Does she have any chronic non- Reproductive problems?
- Age
 - Old mares which have never foaled have increases in early embryonic death.

11 General Comments

on Mare Management

- Reproductive Exam:
 - Assure normal reproductive tract.
 - Rectal exam with ultrasound
 - Vaginal exam –speculum & manual
 - Examine cervix
 - Break hymen

12 Maiden Mare Examination of Cervix

- 13 **Vaginal Abnormalities**
- Persistent hymen
- 14 **Vaginal Abnormalities**
- Persistent medial septum
 - Cervical adhesions
- 15 **Maiden Mare cont.**
- Let Down:
 - Mares from highly athletic backgrounds need time to adjust to life as a brood mare
 - Let effects of drugs be removed from her system
 - Anabolic steroids
 - Drugs to suppress estrus
- 16 **Maiden Mare Cont.**
- 17 **Dry or Barren Mares**
- Mare which has foaled previously but is not currently in foal
 - Why is she barren?
 - Did not conceive last breeding season?
 - Was not bred
- 18 **Barren Mares**
- Needs complete Breeding Soundness Examination PRIOR TO THE BREEDING SEASON!!!!
 - Rectal examination with ultrasound
 - Vaginal examination speculum & manual
- 19 **Vaginal Abnormalities**
- Urine pooling
 - Lacerations or scars of the cervix
- 20 **Barren Mare**
- If BSE indicate any problems
 - Treatment can be complete prior to breeding season.
 - Fall in traditional breeding seasons
- 21 **Wet Mares**
- Mare with nursing foal at her side
 - Exam mare 1 day & 8 days after foaling
 - First estrus after foaling
 - 7-12 days

22 **Foal Heat Breeding**

- Henton's Criteria for Foal Heat Breeding
 - Good foaling history
 - Normal foaling, no retained fetal membranes etc
 - Normal Rectal Examination
 - Follicle of adequate size
 - Adequate uterine involution
 - No hematoma (broad ligament – uterine wall)

23 **Foal Heat Breeding**

- Henton's Criteria:
 - Normal vaginal speculum examination
 - No bruising of cervix or vagina
 - No fluid in anterior vagina
 - No vaginal discharge
 - At least 9 days post foaling
 - Mares bred earlier have high incidence of early embryonic death

24 **Foal Heat Breeding**

- If mare meets criteria-
 - Most mares will have same conception rate as mares bred later
- If mare does not meet criteria-
 - Wait until next normal estrus
 - 30 days post foaling
 - Wait 1 week and short cycle
 - Give prostaglandin

25 **Wet Mares**

- Difficult to detect estrus
 - Teasing with stallion
 - Important in natural breeding
 - Protective of their foals
 - Remove foal
 - Twitch mare and tease

26 **Preparing Your Mare for Breeding**

- Pre-breeding examination:
 - If maiden or barren
 - Rectal examination with ultrasound
 - Identify and record uterine cysts
 - Make sure not be confused with pregnancy
 - Vaginal examination speculum & manual
- Know when to expect estrus next estrus

27 **Preparing Your Mare
for Breeding**

- Get requirements of breeding farm
- Uterine Culture
 - Negative culture required by some farms prior to breeding
 - Some require statement by a veterinarian that mare appears “reproductive healthy”
 - Need to correlate palpation, ultrasound, culture, & cytology

28 **Guarded Culture Instruments**

29 **Types of Equine Breeding Today**

30 **Traditional
Breeding Farm**

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41 **Ultrasound**

- Uterus
- Pregnancy DX
 - 10-14 days
- Edema of uterine folds
- Fluid
- Cysts

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- Endometrial cysts:
often confused
with pregnancy

44 **Breeding with Fresh Chilled
or Frozen Semen**

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51 **Procedure for Breeding
with Fresh Shipped Semen**

- Predict ovulation
 - Mare is rectally palpated daily often with assistance of ultrasound
 - When the mare is determine to likely ovulate within 48 hours
 - The semen is ordered
- The goal is to breed 12-24 hours
before ovulation

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- Determines motility & concentration
- Extends semen
- Ships at least 1 billion spermatozoa

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- Chilled semen is placed in the mare's uterus
 - Gradual warming
 - A small portion is saved to check motility of extended semen
 - The mare is palpated daily to assure ovulation

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56 **External Examination**

- **Conformation**
- **Croup & rump**
- **High tail head**
- **Urine pooling vulvar lips**
- **Straight up & down**
- **Tight vulvar sphincter**
- **“Wind sucking test”**

57 **Causes of Bacterial Endometritis**

- **Recessed anus**
- **Old-thin mares**
- **Treat-caslicks**
- **Abnormal anatomy**
- **Poor perineal conformation**
- **Tilted vulva**

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60 **External Exam**

- **Exudates**
- **Tail**
- **Vulvar lips**
- **Between legs**

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63 **Problem Mares**

64 **Early Embryonic Death**

65 **Early Embryonic Death**

- **Mares conceive and lose the pregnancy before 40 days**
- **Many times associated with endometrial fibrosis**
 - **Older mares**
 - **Treat with supplement progesterone**
- **Low grade infection**

66 **Delayed Uterine Clearance**

- **Mares unable to evacuate uterus**
 - **More motility**

- **Especially after breeding**
 - **Chronic inflammation**
- **Treat with large volume uterine lavages**
 - **Before and after breeding**

67 **The End**

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