

Equine Welfare



Jennie L. Ivey, PhD, PAS
Assistant Professor; Extension Equine Specialist
UTIA Animal Science Department

Overview

- Livestock vs. Companion
- The Unwanted Horse
- BCS and Aging
- Reconditioning the Starved Horse



Are horses livestock?

- Public has a differing perspective of horses compared to other “traditional” livestock
- Causes much sensitivity and attention
 - Social media & press
 - Embellished by lack of education



Definition of Livestock

- "Livestock" means all **equine** as well as animals which are being raised primarily for use as food or fiber for human utilization or consumption including, but not limited to, **cattle, sheep, swine, goats, and poultry**" (TN 39-14-201)
 - Domesticated animals raised in an agricultural setting to produce commodities such as food, fiber and labor.

Horses: The Biggest Problem?

- 90% of welfare calls in TN
- Public perception
- Unwanted horse
 - Owner inexperience
 - Cost of ownership
 - Green horses
 - Lose interest
- Slaughter plants closed
 - Value of common horse is low
 - Eliminates option for owners



The Unwanted Horse

- Horses which are no longer wanted by their current owner because they are old, injured, sick, unmanageable, or fail to meet owner's expectations*
 - Non-life threatening
 - Behavioral/dangerous
 - Unadoptable/feral
 - Unattractive, not athletic, unmarketable, wrong color



*Defined by the Unwanted Horse Coalition, 2005

The Unwanted Horse

- “Unwanted” by owner
 - Sick
 - Injured
 - Old
 - Unmanageable/unrideable
 - Dangerous
 - Fail to meet owner expectations
 - Financial/time constraint

Image: Horse Journal

The Unwanted Horse

- In the U.S. (2007)...
 - ±58,000 horses were processed in the US
 - ±35,000 horses were exported to Canada
 - ±45,000 horses were exported to Mexico
 - ±21,000 un-adoptable feral horses in BLM sanctuaries (\$21.9mil/yr)
 - ±9,000 feral horses in BLM adoption pipeline
 - **Others neglected/abandoned/abused**
 - **>±170,000 unwanted horses each yr**



A Complicated Issue

- Rising cost of care
 - Veterinary cost
 - Feed cost
 - Land/management
- Lack of financial resources
- Closure of U.S. processing facilities



The Unwanted Horse: End of Life Options

- Options available to horse owners
 - Barbituate overdose
 - Captive bolt
 - Gunshot
- Equine processing plants
 - Inspection funding ban
 - Prevents USDA inspectors from
 - Shipped legally to Canada and Mexico



Images: Wikipedia

Equine Welfare & BCS

- “Fails unreasonably to provide food, water, shelter and evidence of reasonable care”
- Context of situation
- Use body condition scoring (BCS) to assist



Body Condition Scoring (BCS)

- Condition can influence productivity, reproduction, health and longevity
 - Avoid either extreme
 - Fatness
 - Over-conditioning
 - Under-conditioning
 - Thinness



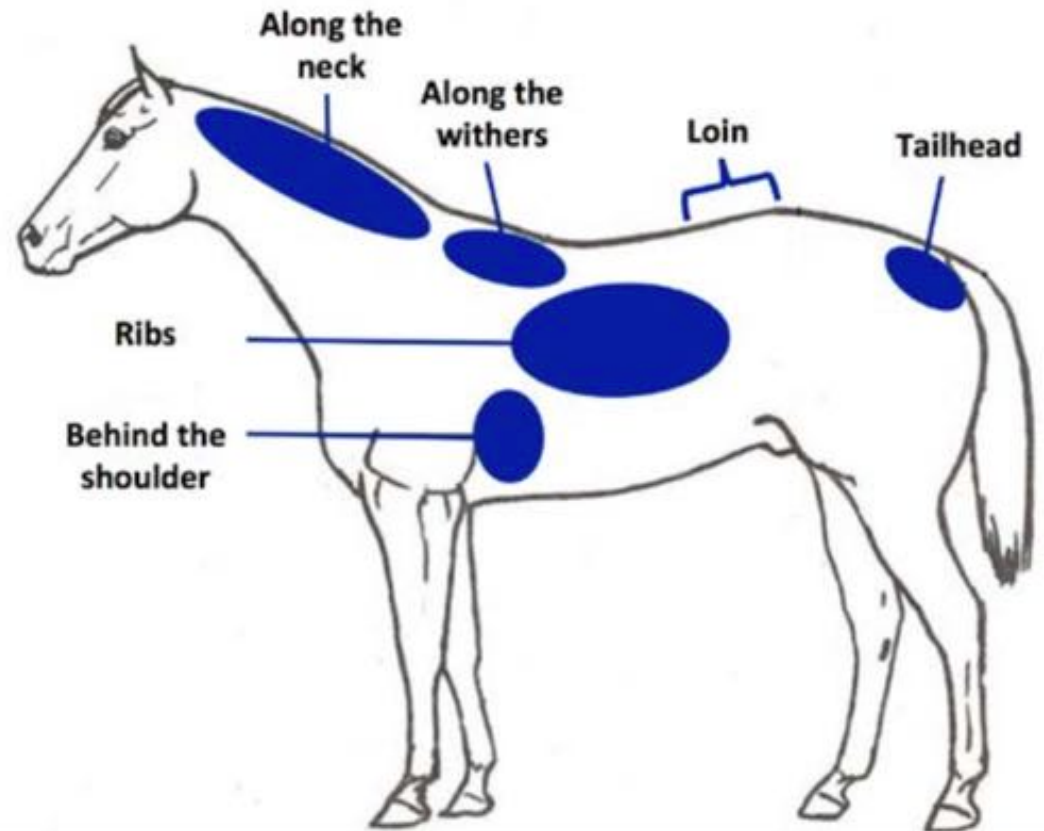
Influencing Factors

- Age
- Species
- Breed
- Performance Status
 - Breeding/Lactation
 - Exercise
- Health
- Disease
- Thin does not always equal poorly managed/neglect!



BCS – Horses and Other Equids

- BCS 1
 - Emaciated/poor
- BCS 5
 - Moderate
- BCS 9
 - Extremely fat/obese



| Score | Condition | Description |
|-------|-------------------|--|
| 1 | Poor | The horse is extremely emaciated. Ribs, tailhead, backbone (spinous and transverse process) and hip bones project prominently. Bone structure of the neck, withers, and shoulder are easily noticeable. No fatty tissues can be felt. |
| 2 | Very Thin | The horse is emaciated. A slight fat covering over the vertebrae is present. Ribs, backbone (spinous and transverse process), hips and tailhead are prominent. Neck, shoulders and withers are discernable. |
| 3 | Thin | Fat built up about halfway on vertebrae (spinous process can still be felt). Tailhead evident, but individual vertebrae cannot be seen. Slight fat cover over ribs. Hip bones appear rounded but are still noticeable. Withers, shoulders and neck are emphasized. |
| 4 | Moderately Thin | Negative crease along back. Faint outline of ribs is noticeable. Fat can be felt around tailhead, prominence is dependent on conformation. Hip bones cannot be seen. Neck, withers and shoulders are not obviously thin. |
| 5 | Moderate | Back is level. Ribs are not easily seen but can be felt. Tailhead fat feels spongy. Hip bones are not noticeable. Withers, neck and shoulders are not obviously thin. |
| 6 | Moderately Fleshy | Slight crease down back may be present. Fat over ribs can be felt and tailhead fat feels soft. Fat beginning to be deposited on sides of withers, behind shoulders and along the neck. |
| 7 | Fleshy | May have crease down back. Individual ribs can be felt, but fat filling between ribs is noticeable. Tailhead fat is soft. Fat deposited along withers, behind shoulder and along the neck. |
| 8 | Fat | Crease down back. Difficult to feel ribs. Fat around tailhead is very soft. Areas along withers and behind shoulder are filled with fat. Thickening of neck is noticeable. Fat deposited along inner thigh. |
| 9 | Extremely Fat | Obvious crease down back. Patchy fat appearing over ribs. Fat bulging around tailhead, along neck, behind shoulder and along wither. Flank filled with fat. Inner thighs may rub together. |

BCS – Horses and Other Equids

4



2



3



Geoff Tucker, DVM

BCS – Horses and Other Equids



5



8



5

Evaluation Tips

- Ask yourself questions
- Assess the surroundings
 - Other indicators of welfare
- Condition of one animal vs. whole herd
- Contributing factors to body condition
 - Age?



Dental Age Determination

- Permanent eruption times
 - Consistent
- Wearing
 - Considerable variation
- Educated guess after 5 years



Deciduous

- DI_1
 - 6 days
- DI_2
 - 6 weeks
- DI_3
 - 6 months



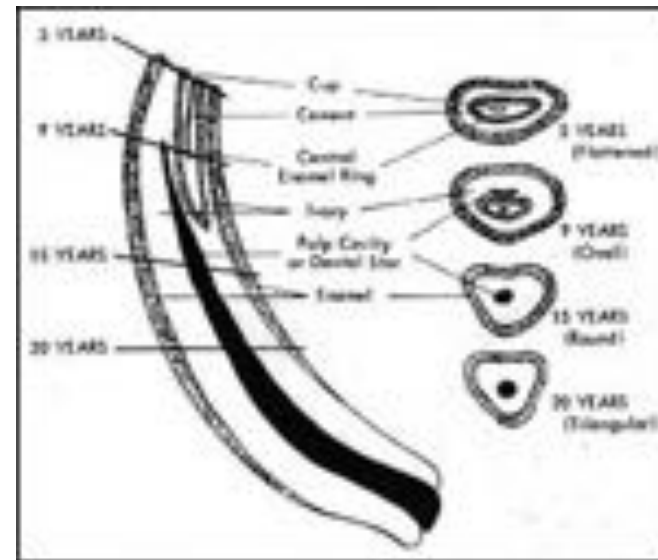
Permanent

- PI_1
 - 2.5-3 years
- PI_2
 - 3.5-4 years
- PI_3
 - 4.5-5 years
- Canine
 - 4-5 years



Tooth Wear

- PI_1 cups gone
– 6 years
- PI_2 cups gone
– 7 years
- PI_3 cups gone
– 8 years



Tooth Eruption

| Tooth Identification | Eruption | |
|----------------------|------------------|------------------|
| | <i>Deciduous</i> | <i>Permanent</i> |
| Incisors | | |
| 1 | 6 days | 2.5-3 years |
| 2 | 6 weeks | 3.5-4 years |
| 3 | 6 months | 4.5-5 years |
| Canine | | 4-5 years |

Wear of Permanent Teeth

| | Incisor | | |
|--------------------|-----------------|----------|-------------|
| | 1 | 2 | 3 |
| Smooth (cups gone) | 6 years | 7 years | 8 years |
| Stars | 8 years | 9 years | 10 years |
| Round | 9 years | 10 years | 11 years |
| Triangular | 16 years | 17 years | 17-18 years |
| Rectangular | 18-20+ years | | |

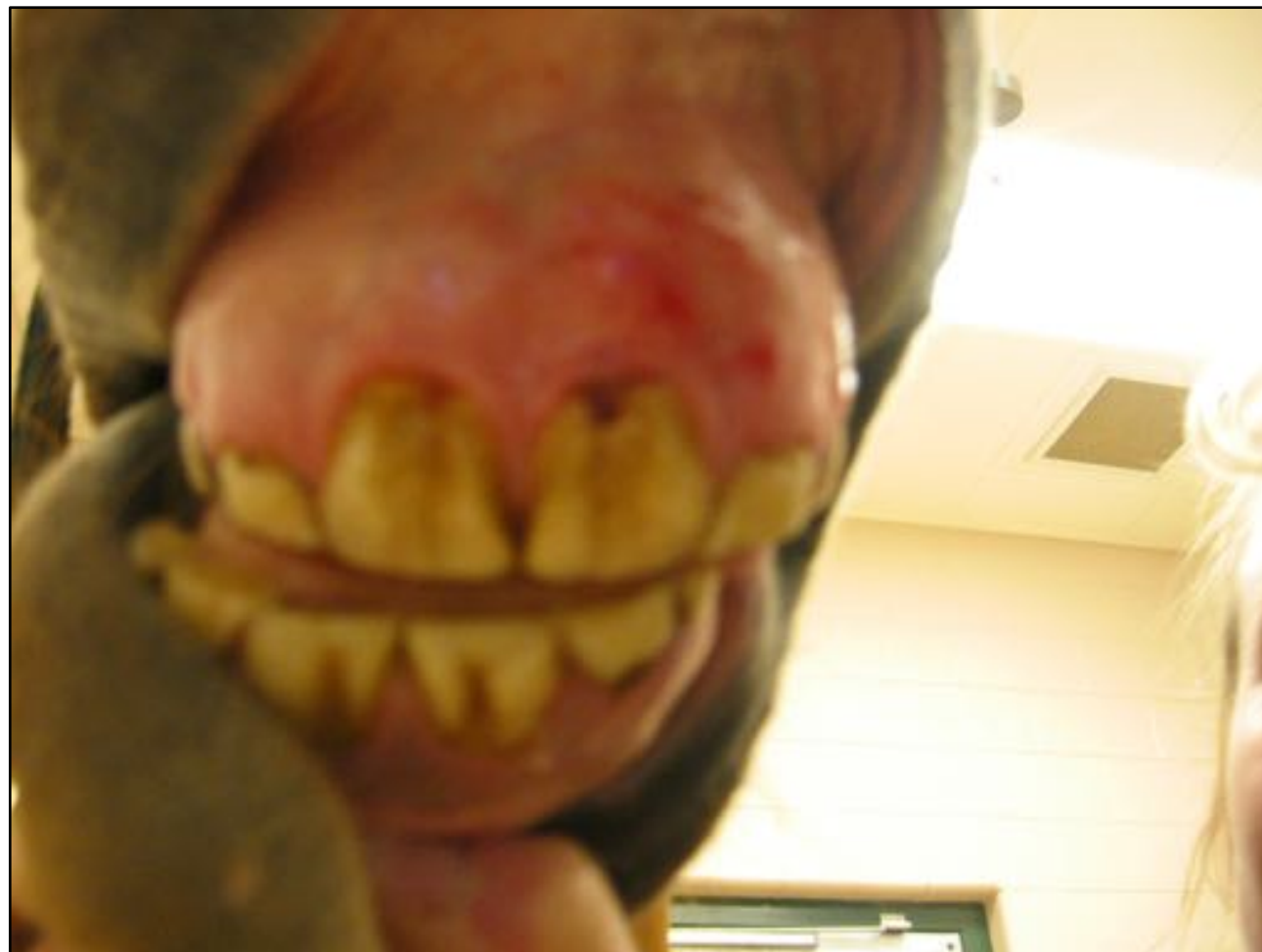
Galvayne's Groove

- Near gumline 10 years
- Halfway 15 years
- End of tooth 20 years
- Half gone 25 years
- Completely gone 30 years



Younger vs. Older







Real. Life. Solutions.



Refeeding the Starved Horse



Water

- Most essential nutrient!
- About 60% of the body is water
- Most horses need 8-12 gallons per day
 - More when hot
 - Provide free access



Water Requirements

| Class | Outside Temperature ° F | Range of Water Intake (Gallons/day) |
|----------------------|----------------------------|--|
| Idle, Mature | 68 | 6 - 8 |
| | 86 | 11 - 14 |
| | <0 | 10 - 13 |
| Pregnancy | 68 | 7 - 9 |
| Lactating | 68 | 14 - 21 |
| Moderate Exercise | 68 | 10 - 12 |
| Moderate Exercise | 95 | 19 - 24 |
| Yearling | 68 | 5 - 6 |

Starved Horse

- Considered starved and in need of special attention if
 - BCS less than 3, no other associated health problems
 - Nothing to eat for 5 or more days
 - Lost more than 15% of body weight in previous 60 days
 - No associated health problems



General Recommendations

- Reintroduce feeds gradually
 - Alternate methods if unable or unwilling to eat
- Use caution with high starch or nutrient dense feeds
- Small frequent feedings
 - High fiber
- Recommend to house alone
 - Out of sight
- Safe gain of 0.5-1 lb per day
 - 16-24 Mcal over maintenance DE to gain 2.2 lb body weight
 - 35-45 lbs = 1 BCS

Feeding Forages

- Alfalfa hay considered best
 - Palatable, high nutrient quality and quantity
 - Typically low in sugar and starch
- Grass hay
 - Can be used, typically 2x amount needed
- CP% above 14%
- ADF less than 40%
- NDF less than 53%



Feeding Concentrates

- Follow other concentrate rules
- High in fat and fiber are preferred
- Consider dentition
- Senior feeds work well
 - Lower in calories
 - Supplement with fat
- General maximum guideline
 - 3.5 oz oil per 220 lb BW per day
 - 8 oz oil = ~2 Mcal



Feeding Recommendations

| Feedstuff | Feeding Recommendations | | |
|--------------|--|--|----------------|
| | Days | Amount | Frequency |
| Alfalfa Hay | 1 to 3 | 1 lb | Every 4 hours |
| | 4 | 2 lbs | Every 6 hours |
| | 5 | 3 lbs | Every 8 hours |
| | 6 to 14 | 4 lbs | Every 8 hours |
| | 15 to several months | Free choice | Every 12 hours |
| Grass Hay | 1 to 3 | 2 lb | Every 4 hours |
| | 4 | 4 lbs | Every 6 hours |
| | 5 | 6 lbs | Every 8 hours |
| | 6 to 14 | 8 lbs | Every 8 hours |
| | 15 to several months | Free choice | Every 12 hours |
| Concentrates | 14 or later | 0.5 lb | Every 12 hours |
| | 17 or later | 1 lb | Every 12 hours |
| | 21 or later | 1.5 lbs | Every 12 hours |
| | 23 or later | 2 lbs | Every 12 hours |
| | Continue until desired level is achieved | Feed no more than 0.75% of body weight per feeding | Every 12 hours |

Questions?

Contact Information:

Dr. Jennie L. Ivey, PhD, PAS

Animal Science Department

Phone: 865-974-3157

Email: jzivey@utk.edu

UTHorse.com

