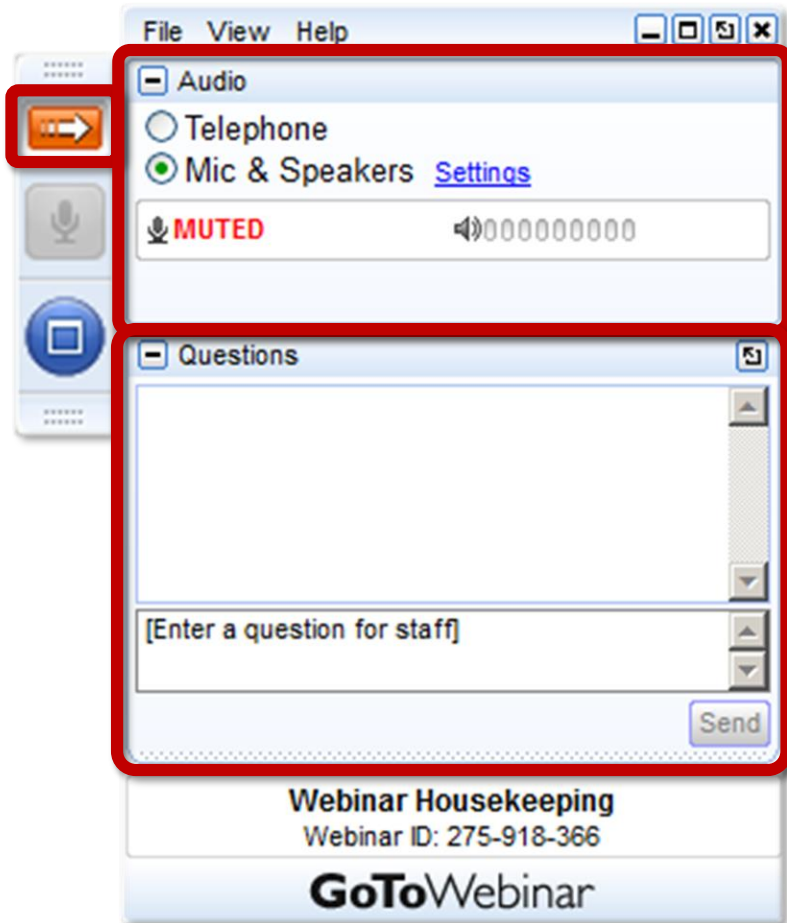


Winter Feeding – Can I Feed My Easy Keeper and Hard Keeper Horses the Same?



“Nutrition is the key to success”



Your Participation

Open and close your control panel

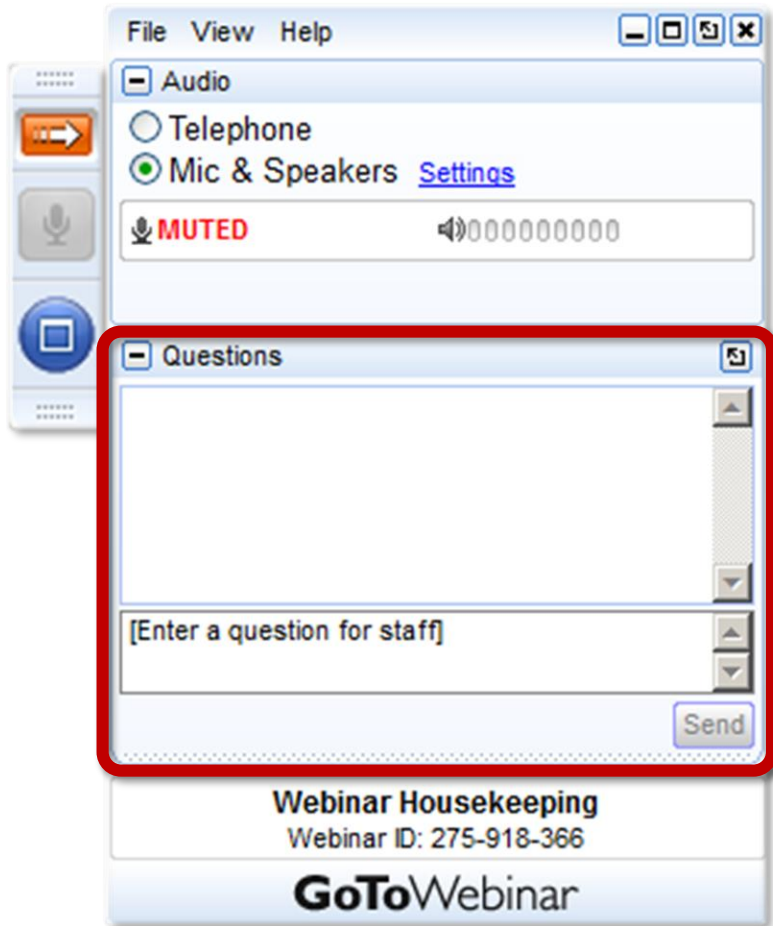
Join audio:

- Choose **Mic & Speakers** to use VoIP
- Choose **Telephone** and dial using the information provided

Submit questions and comments via the Questions panel

Note: Today's presentation is being recorded and will be provided within 48 hours.

“Nutrition is the key to success”



Your Participation

- Please continue to submit your text questions and comments using the Questions panel

For more information, please contact kstarr@standleeforage.com.

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Winter Feeding – Can I Feed My Easy Keeper and Hard Keeper Horses the Same?



DR. TANIA CUBITT
PERFORMANCE HORSE NUTRITION



OUTLINE

“Nutrition is the key to success”

- Digestive function
- Energy requirements
- Fiber requirements
- Water requirements
- Differences in nutrient intake between hard keepers and easy keepers
- Questions



Digestive Function



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DIGESTIVE FUNCTION - EVOLUTION

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NATURAL DIET

- Fiber-based
- Wide variety of forages
- Nibbler – small amounts
- 12-18hrs grazing
- Moving while eating
- Herd
- Eating from ground
 - Natural drainage of the respiratory tract
 - Increases chewing time
 - Prevents muscular tension in the neck & back
 - Maintains teeth alignment



MODERN DIET

- Cereal grain-based
- Rapid intake
- Increased acidity of GI tract
- Frustration due to confinement
- Lack of socialization
- Exercise level
- Fed at chest height or higher



WINTER

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- Horses decrease feed intake in cold AND windy weather – seek shelter
- Snow accumulation greater than 7 inches covers grass and decreases intake of pasture - Decreases grazing time (24%) and decreases intake (22%)
- Pawing through deep snow to get grass greatly increases the energy requirement of the horse
- In cold and windy conditions, horses lose more body heat and burn more energy to stay warm

Poll Question

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Energy Requirements



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FORAGE AMOUNT

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- Absolute minimum = 1% of B.W.
1000 lb horse = 10 lbs forage (DM)
- Weight loss = 1.2% of B.W. 1000 lb horse = 12 lbs forage (DM)
- Recommended minimum = 1.5% of B.W. 1000 lb horse = 15 lbs forage (DM)
- Normal forage intake = 1.8 to 2.5% of B.W. (DM)
- Maximum intake = 3 to 3.5% of B.W. (DM)



LOWER CRITICAL TEMPERATURE



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- The “Lower Critical Temperature (LCT)” is the temperature below which metabolic heat production must be increased to maintain body temperature
- Mature horses (LCT) = 5°F to 41°F
 - Thin coat 41°F
 - Thick coat 5°F
- Young horses (LCT) = 12°F to 32°F
- For each decrease in coldness of 1 degree Fahrenheit below the critical temperature, there is an increase in digestible energy requirements for body temperature maintenance

LOWER CRITICAL TEMPERATURE



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Estimated Feed Energy Increase at Different Magnitudes of Cold Below the Lower Critical Temperature of Mature Horses

Difference in F Below Critical Temperature (°)	Digestible Energy Increase (Mcal/day)	Average Feed Intake Increase (lb/day)*
0	0	0
10	2	2
20	4	4
30	6	6
40	8	8

**Assuming an energy density of 1.0 Mcal/pounds, which is typical of good quality forage*

EFFECT OF WIND AND RAIN ON DIGESTIBLE ENERGY REQUIREMENT



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Assume a 1000 lb horse eating at least 1.5% of its body weight in hay to maintain body condition and health (at least 15lbs of hay)

Average temperature	Conditions	Additional Mcal/day	Additional Hay
32°F	10-15 mph wind	4-8 Mcal/day	4-8 pounds of hay
32°F	Rain	6 Mcal/day	6 pounds of hay
32°F	Rain and wind	10-14 Mcal/day*	10-14 pounds/day

**May not be able to consume enough hay to meet requirements*

Fiber Requirements



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FORAGE MANAGEMENT: HAY

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- Important to mimic grazing behavior
- **Hay** – Extend meal time



HOW MUCH HAY?

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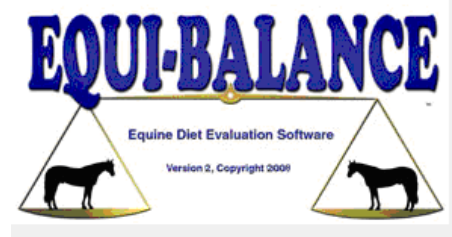
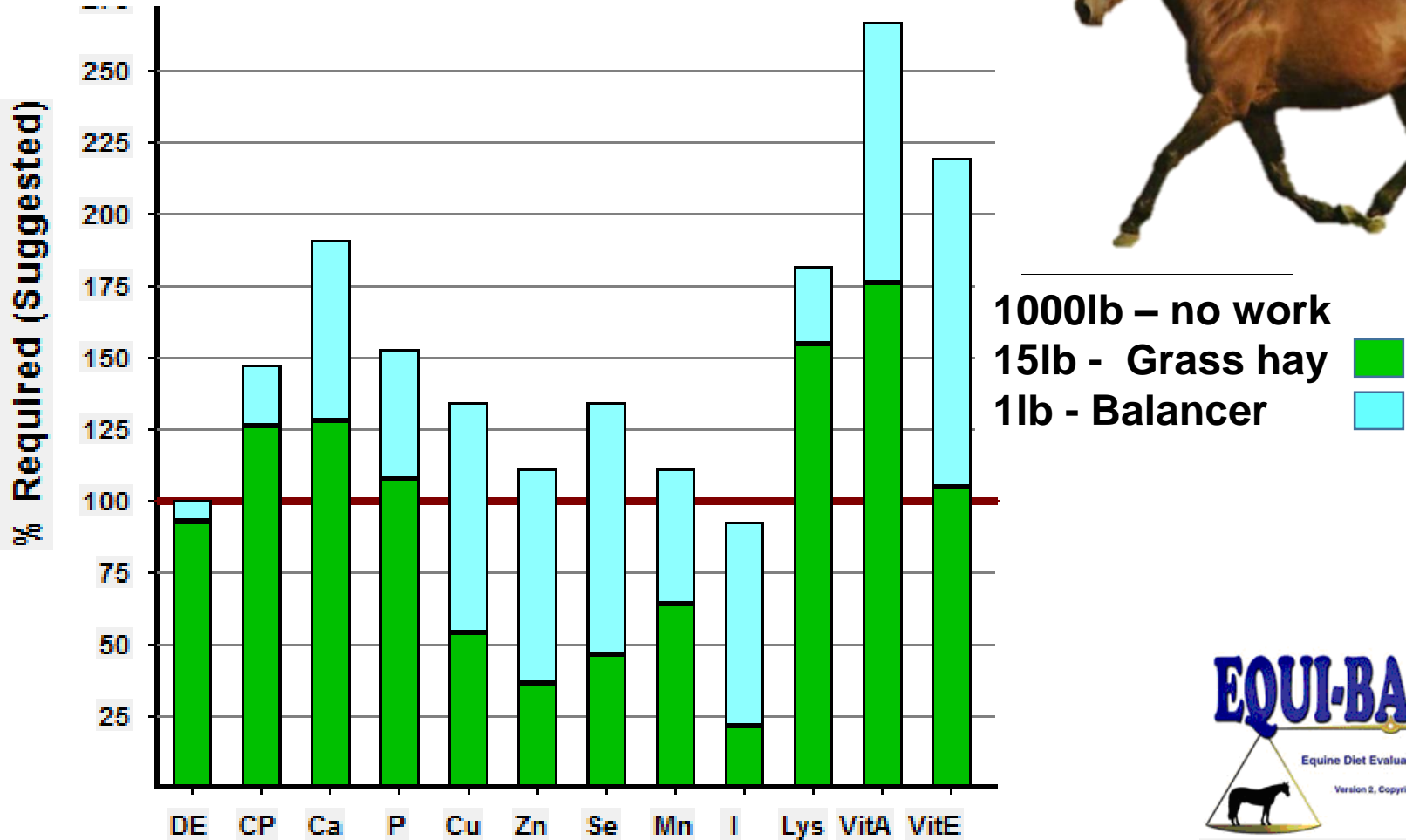
- How much hay will your horse need this winter?
- 1.5% BW—1000lb horse = 15lbs per day
- 5 months of winter = 150 days
- 15lbs x 150 days = 2250lbs or 1.125 tons!!!!
- Average grass bale approx. 40lbs ~ 60 bales



HAY ALTERNATIVES



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HAY ALTERNATIVES

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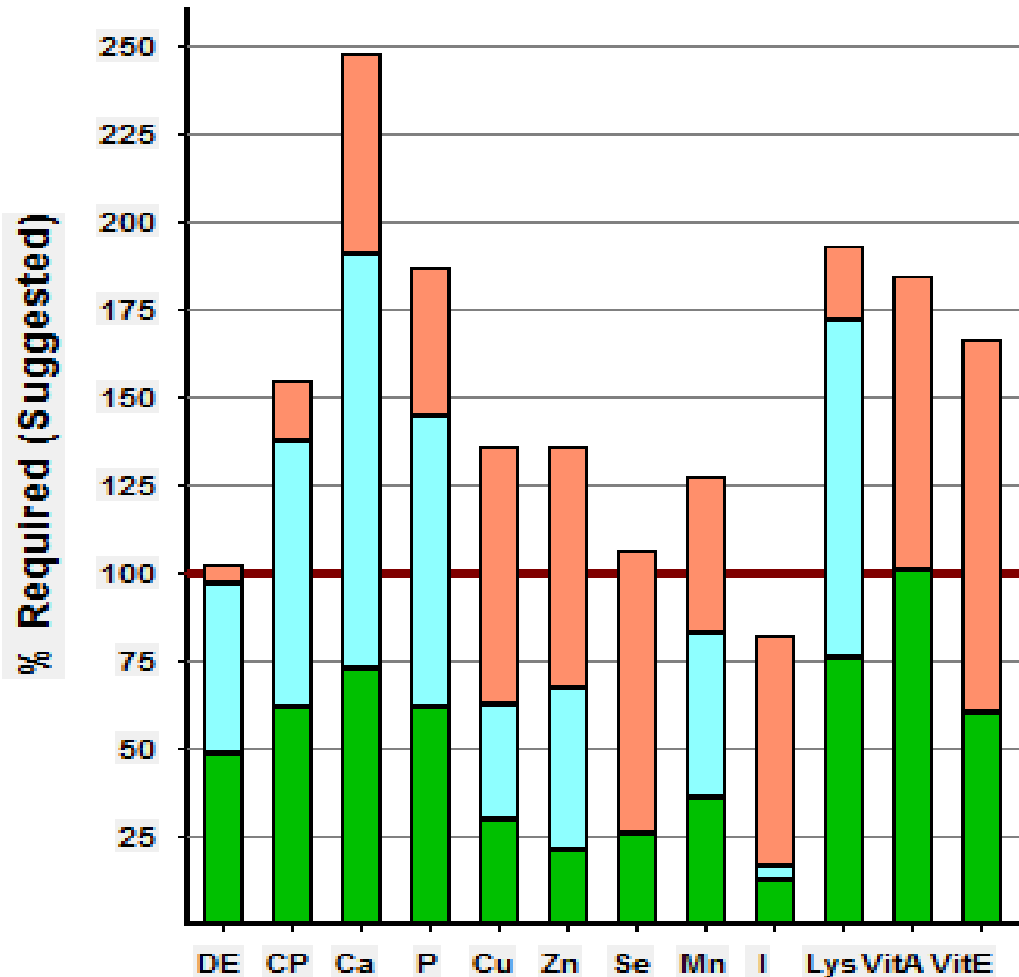
- Timothy pellets
- Alfalfa pellets/cubes
- Beet pulp shreds/pellets
- Soy hulls



Hay Alternative	Typical NSC%
Timothy pellets	12
Alfalfa pellets	9
BP shreds/pellets	11
Soy hulls	4

HAY ALTERNATIVES

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1000lb – no work
 10lb - Grass hay
 5lb – Timothy Pellets
 1lb - Balancer



Water Requirements



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ESTIMATED WATER NEEDS OF A 1000LB HORSE



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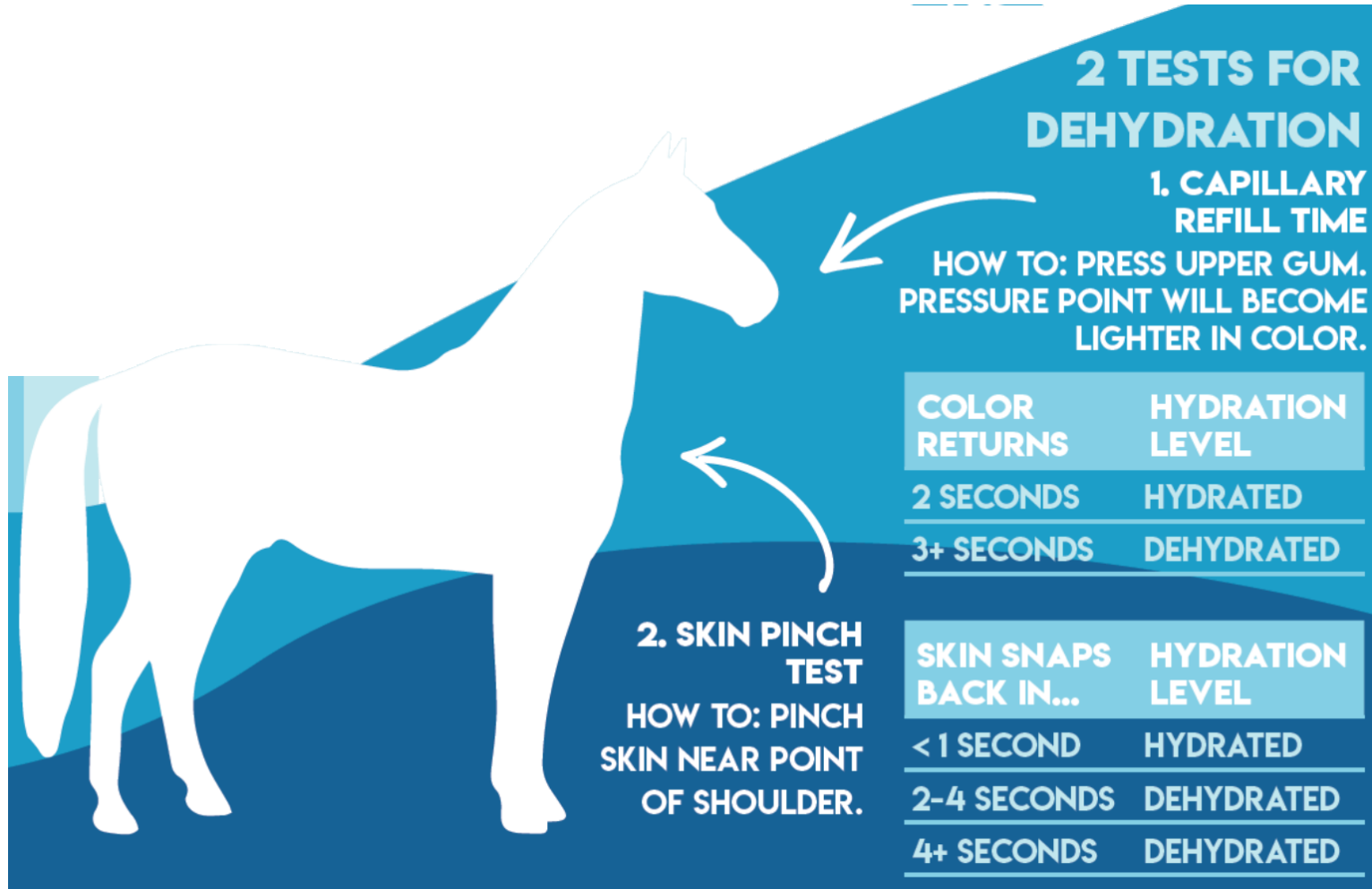


MAINTENANCE HORSES WILL DRINK 5-15 GALLONS OF WATER PER DAY.

Horse Level of Activity	Average Total Water Intake (gallons/day)
Maintenance	5 - 15
Yearling	4 - 5
Exercise	15 - 20
Pregnancy	5 - 15
Lactating	13 - 20

DEHYDRATION

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2 TESTS FOR DEHYDRATION

1. CAPILLARY REFILL TIME

HOW TO: PRESS UPPER GUM. PRESSURE POINT WILL BECOME LIGHTER IN COLOR.

COLOR RETURNS	HYDRATION LEVEL
2 SECONDS	HYDRATED
3+ SECONDS	DEHYDRATED

2. SKIN PINCH TEST

HOW TO: PINCH SKIN NEAR POINT OF SHOULDER.

SKIN SNAPS BACK IN...	HYDRATION LEVEL
< 1 SECOND	HYDRATED
2-4 SECONDS	DEHYDRATED
4+ SECONDS	DEHYDRATED

Easy Keeper vs Hard Keeper?



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FAT (BCS 8)

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EXTREMELY FAT (BCS 9)

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Poll Question

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THIN HORSE

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- Requires Weight Gain
- In a 1100lb horse: $1 \text{ BCS} = 40\text{-}45\text{lb}$



THIN HORSE FEEDING

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- Need 40 lb of gain
- Safe to assume 1 BCS per **60 days (2 months)**
- Need ~10Mcal above maintenance for 1lb gain



THIN HORSE FEEDING

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Ingredient	DE Mcal/lb	Additional lbs/day
Oats	1.5	4.4
Rice Bran	1.5	4.4
Beet Pulp (dry, no molasses)	1.27	5.2
Alfalfa hay	1.1	6.0
Fat/Oil	4.6	1.4 (a little over 2 cups)

*Needed an additional 6.6 Mcal/day above maintenance



BLANKETING???

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Questions



PHN
PERFORMANCE HORSE NUTRITION



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Thank you for joining us!

For follow-up questions, please contact our customer relations:

1-800-398-0819

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