

# Hard Keeper™ Solution

***Slow burning energy for better weight gain and maintenance, with the benefits of Omega-3 fatty acids***

- For horses that can't keep weight on and for healthy skin and coat condition
- Provides slow burning calories in the form of easily digested fats to increase energy intake without making the horse 'hot'
- A rich source of Omega-6 and Omega-3 fatty acids
- Replenishes 7 beneficial direct-fed microbial cultures

**A Breakthrough in Horse Health Care** Hard Keeper Solution is designed to help horses gain and maintain weight and develop beautiful skin and coat. Feeding extra grain to boost calories can lead to digestive upset and other hazards, and may not help the horse achieve and maintain optimum weight. Instead, Hard Keeper Solution feeds slow-burning calories in the form of easily digested fats, to significantly increase energy intake without making the horse "hot" or unthrifty. Hard Keeper also supplies the benefits of Omega-3 fatty acids, which are so important for skin and coat condition. It's the perfect solution for show horses, and for any horse that needs help with weight maintenance or coat condition.

**Feed Fat For Better Performance, Recovery and Health** Over the years there has been great controversy over the ability of the equine system to utilize dietary fat. The common belief had been that a high-carbohydrate, low-fat diet was best, but recent research has shown that a high fat diet (12%+) may actually be of greater benefit to horses. Dietary fat may enhance performance by delaying lactate accumulation, thus delaying the onset of fatigue<sup>1</sup>. The feeding of dietary fat has also been shown to naturally increase post-exercise water consumption<sup>2</sup>, which is always important for equine health. Not only has recent research shown that feeding a high-fat diet, for prolonged periods, is not harmful to the equine physiology<sup>3</sup>, it has shown that there are actual health and performance benefits to feeding diets with over 12% fat.

**How Does it Work?** Research shows that when fat is added to the feed, even at the extremely high range of 29% of total diet, the horse's metabolism adapts to take advantage of the slower-burning energy source. The equine system will naturally produce and use less glucose and carbohydrates, and will instead use fats for energy<sup>4</sup>. Added dietary fat is usually most beneficial to show horses, horses performing sustained aerobic exercise, and horses in need of improved weight retention.

**Omega-3 Fatty Acids and More** Hard Keeper is a pleasing blend of grains, fats, and flax seed meal, a rich source of alpha linolenic acid (ALA) and other essential Omega-3 fatty acids. Scientists study Omega-3 fatty acids for their role in maintaining immune balance in the epidermis and for their beneficial impact on prostaglandin activity. Hard Keeper also replenishes six beneficial direct-fed microbial cultures, including *Lactobacillus acidophilus*.

**Recommended Feeding** Enclosed scoop holds 2 ounces. For enhancing condition of skin and coat, feed one scoop (2 oz by weight) daily. For weight gain and maintenance, feed 2 scoops (4 oz by weight) or more daily. Increase feeding of large breeds proportionately according to body weight in excess of 1,000 pounds. Horses in heavy training or performance may be fed 6 or more ounces daily. Keep cool and dry. Reseal after each use.

## References:

1. Sloet van Oldruitenborgh-Oosterbaan MM, et al. Exercise- and metabolism-associated blood variables in Standardbreds fed either a low- or a high-fat diet. *Equine Vet J Suppl.* 2002 Sep;(34):29-32. (abstract)
2. Crandell KG, Pagan JD, Harris P, Duren SE. A comparison of grain, oil and beet pulp as energy sources for the exercised horse. *Equine Vet J Suppl.* 1999 Jul;30:485-9. (abstract)
3. Zeyner A, et al. Effect of feeding exercised horses on high-starch or high-fat diets for 390 days. *Equine Vet J Suppl.* 2002 Sep;(34):50-7. (abstract)
4. Pagan JD et al. Effects of fat adaptation on glucose kinetics and substrate oxidation during low-intensity exercise. *Equine Vet J Suppl.* 2002 Sep;(34):33-8. (abstract)

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