

## ADVANTAGES OF USING OIL IN HORSES' RATION

Fats have been added to horse diets from past to present. Even small amounts are useful in improving coat shine, and when mixed with feed it also has benefits such as reducing dust or aiding in pelleting processes and increasing the energy of the diet.



### Other benefits of using fats in the diet:

- Reduced lactic acid accumulation in the muscles and blood by reducing the use of glycogen
- Reduction of myopathy (retention)
- Reduction in muscle damage
- Horses behave calmer than grain-based diets.

Any horse that is growing, lactating or exercising has an increased energy need.

The use of oil helps the young horse to grow optimally and the adult horse to maintain optimum body weight, condition and reproductive activity or athletic performance. In traditional diets, the increased energy need in such cases is usually provided by an increase in the proportion of grains in the diet. However, the most important disadvantages of increased grain consumption are:

(A) Increases the risk of colic (pain), diarrhea (diarrhea), and exercise myopathy (stiffness).

(B) Decreases the amount of water, electrolytes and energy-providing nutrients in the intestines; however, these are quite significant in the performance of horses that exercise endurance type.

C) It will increase the risk of distress and destabilization in horses and may lead to behavioral disorders.

Studies show that fats and oils added to the horse's diet can be digested by 76-94%.



Fats provide about 3 times more digestible energy than an equal amount of grains.

To provide the same amount of energy as about 350 ml of oil:

1 kg Oats

900 gr Barley

· 835 g of corn should be used.

High-fat diets have both aerobic (Submaximal, long-duration) activity and anaerobic (sprint type) activity and fatigue delay feature. Horses fed a high-fat diet show greater muscle glycogen use and no change in blood glucose concentration in anaerobic activity, but less reduction in blood glucose concentrations and preservation of muscle glycogen in aerobic activity (Oldham et al., 1990). Studies

(Custalow et al., 1993; Scott et al., 1992), showed that both the addition of fat to the diet and a high body fat ratio increase the racing performance of horses.

All fats are easily used by the horse to provide the same amount of energy, but there can be a difference in palatability and other ingredients.

- Each oil has a different mixture of fatty acids (Omega-3, Omega-6. Triglyceride content and their correct ratio are very important.

- Oils containing high amounts of omega-3 have natural anti-inflammatory compounds and healing effects on hormone mechanism.

- Excessively high omega-3 fatty acids can make the controls unstable.

### **How much fat should be added to the ration?**

Although generally horse feed contains 3% to 6% fat, horses can use up to 20% or even 30% fat for the total diet. Higher amounts can reduce the flavor of the feed and cause soft stools. In addition, it is beneficial to use it at lower rates to increase the amount of muscle glycogen.

#### References:

Custalow, S.E., Ferrante, P.L., Taylor, L.E. et al. (1993). Lactate and glucose response to exercise and dietary fat. Proc. Equine Nutr. & Physiol. Soc. Symp., pp 179-184.

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