



FEEDING FATS & OILS WHY FEED THEM?

A Balancing Act

Overview of fats/oils

- Common forms are oils, seeds, pellets or ground 'meals'. Plant sources of fat consumed by horses are generally rich in unsaturated fatty acids. Fats/oils **added** to equine diets are mostly mono/polyunsaturated or saturated.
- Omega 3 (ALA anti-inflammatory)** & **Omega 6 (LA pro-inflammatory)** fatty acids are known as 'essential' and must be added to the diet. **Omega 9 fatty acid** is 'non-essential' as it can be made within the horse's body.
- Considered a slow release or 'cool' energy source, supplemental fats/oils are well tolerated in a horse's diet. Naturally occurring fat in forages or grains shown to have a digestibility of 5-57% (*Fonnesbeck et al 1967, Sturgeon et al 2000*) and 55-76% in grains (*Hintz & Schryver 1989*)
Recent studies have shown that supplemented fat or oil have a digestibility of nearly 100% (*Kronfeld et al 2004*)

OMEGA 3 BENEFITS

Short-term: improved skin & coat condition, fewer skin allergies & anti-inflammation characteristics

Long Term: include improved hoof quality, increased bone density, improved joint health, reduced muscle soreness, increased tissue elasticity

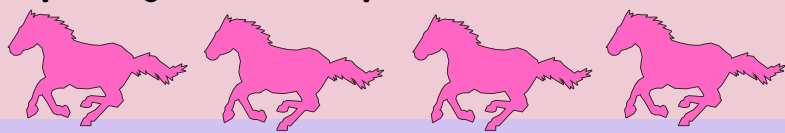


FEEDING OILS/FATS - Either with a commercial fat-supplemented feeds or top dress with oil. If top dressing, it's been suggested that additional vitamin E may be required ie suggested amount is 100IU for every additional 100ml oil. However, there have been limited studies on this to date.

DIGESTIBLE ENERGY VALUE: One cup of oil equivalent to 0.55kg of oats or ricebran and 0.5kg maize

HOW MUCH TO FEED? Depends on feeding goals eg Adding shine to the coat - up to 125ml

For improving condition or performance benefits - 250-500ml.



Different oils contain different levels of Om3 & 6 which makes them unequal from a nutritional perspective

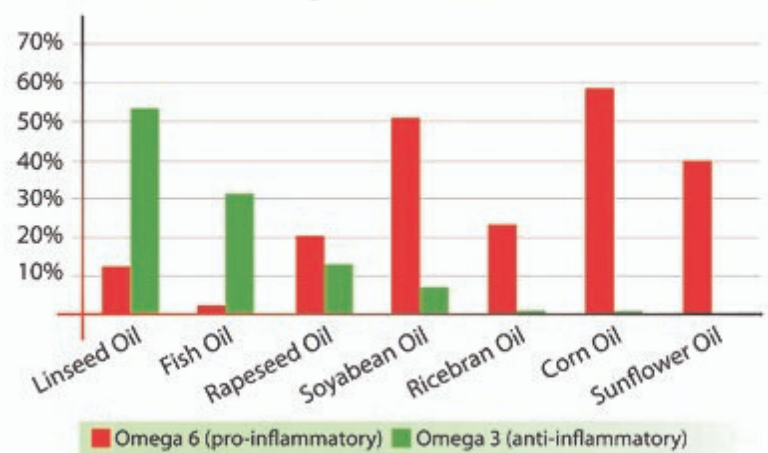
OMEGA 6 BENEFITS

Helps maintain immune function and tissue repair and is beneficial during infection and sickness.

Balance of both Om 3 & 6 EFAs required in the diet. Work synergistically with each other.



Levels of Omega 3 & 6 in oil sources



Top tips for feeding fats/oils...

- Always add fats to the diet gradually to avoid digestive upsets - check for greasy or greyish droppings which can indicate too rapid an introduction
- Avoid feeding to horses and ponies that are already overweight
- Avoid feeding to horses or ponies that are prone to or experience hyperlipemia (too much fats, cholesterol or triglycerides in the blood)
- Avoid adding fat to a starved or severely malnourished horse in the initial re-feeding stage. These horses will already have a compromised digestive system and organ function and will not be able to tolerate it
- Pay close attention to potential nutrient imbalances when top dressing oil on to feed as high levels may create a higher need for antioxidants such as vitamin E
- Always opt to keep your horse's diet higher in Omega 3 than Omega 6, as nature intended

Copra...the facts

By-product of coconut oil production from the dried white flesh of the coconut - because of processing, copra is often brownish in color

FOR: Low nonstructural carbohydrate (NSC) content, making it suitable for horses with metabolic issues that have trouble handling starch and sugar, eg IR, EMS or PSSM

Promotes weight gain and a shiny coat with fat content around 8%

AGAINST: It's a saturated fat - one could question the health benefits of feeding a horse a saturated fat long-term

Can cause impaction colic and other gastrointestinal distress if not soaked properly

High in phosphorus, low in calcium, and this imbalance can be a problem when fed in large amounts. The calcium-to-phosphorus ratio can be as low as 0.25:1.

Can have a zinc-to-copper ratio imbalance, ie rich in copper, average in zinc. Ideal Zn:cu is ideal at 3:1 to 5:1, some copra can be as low as 2:1.

TOP TIP:
ENSURE YOUR OIL IS IN A DARK CONTAINER AND REFRIGERATE TO PREVENT OXIDATION AND RANCIDITY

