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LINSEED

Linseed or Flaxseed (as its also called) is a popular supplement used by many equestrians. Linseed is a good source of plant-based omega-3 fatty acids and can be used for assisting overall condition or simply for improving coat quality.

This article looks at the various forms of linseed that can be used and what the benefits are of doing so.

Whole Linseed

Linseeds are small hard seeds that become slimy once in contact with saliva or water. This is due to the mucilage (viscous secretion) that forms when they become wet. This secretion has been shown to have a small effect on gastrointestinal function and it may offer some form of lubrication or protection for the gut, however this has not been completely researched. There are two varieties, golden and brown, and both have virtually the same nutritional profile, including almost identical amounts of omega-3 fatty acids and so either can be used. However, brown linseed is more commonly fed to horses. The benefits of linseed start with the high fat content (~40%) and the type of fatty acids that make up that fat. Linseed is high in omega-3 fatty acids, which are essential to the horse and responsible for improving cellular integrity and balancing inflammatory response in the body. Linseed also contains good soluble fibre which not

only is ideal for overall gut health but also supplies energy/calories to the horse. Linseed is also low in starch and provides high quality protein. So, feeding whole linseed is a great option for horses needing extra condition, especially those who have a sensitivity to starch but still need condition. It's also useful for horses needing assistance with a poor coat, or those prone to digestive upsets. Horses appear to digest the whole seeds well however the digestibility of the nutrients in the whole seed has been shown to perhaps be more limited compared with other forms. Although it should be noted that the horse's ability to digest the whole seeds can improve over time with consistent use and so they shouldn't be ruled out completely.

Ground and Stabilized Linseed

Certainly, ground linseed will be more fully digested. However, as soon as the outer hull is disrupted, the interior can oxidize, leading to rancidity. Therefore, grind linseeds right before feeding or purchase ground stabilized/micronized linseed, which has a much longer shelf life and resists oxidation. Some forms of ground linseed are, in fact, sliced rather than ground, and these forms might be stable for up to two years.



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Feeding Whole or Ground

The traditional way to feed whole linseed was boiling. Boiling or grinding breaks open the hard shell to help expose nutrients to digestive processes, so if linseed is being used for its overall health value then this may be the most suitable route to take.

However, do note, that boiling can also reduce the Omega content and so if this is the reason linseed is being fed, opting for oil or stabilised/micronized version may be more suitable in order to preserve this aspect.

In years gone by it was thought that feeding raw linseed could lead to cyanide poisoning. This comes from the fact that linseed contains cyanogenic glycosides (CGs) as well as an enzyme in the seeds called Linamarase. Linamarase breaks down these CGs into cyanohydrins. When the seeds are crushed and exposed to air and water the CGs can be broken down into hydrogen cyanide (HC).

Boiling or micronizing linseed does not result in any production of hydrogen cyanide as the heat prevents the enzyme from working. Also feeding raw linseed is not an issue because the acidity in the horses' stomach prevents the production of hydrogen cyanide and linseed oil does not contain water, CGs or Linamarase and so there is no risk of HC poisoning in these cases.

The only risk of hydrogen cyanide production is when uncooked linseed is crushed/ground and is left in water at a warm temperature (ie not boiling) for a long period of time before feeding.

Therefore, whole linseed should ideally be added straight into boiling water, and if it needs to be ground then do so just before feeding. Commercial products that are milled or ground can be safely fed because they have used a stabilization process that stops the production of cyanide.

Linseed Oil

Linseed oil is made up almost exclusively of the seeds' fat component, whereas the entire seeds also contain protein, carbohydrates, minerals, and vitamins. However, for most using the fat is the main reason for feeding. Therefore, if adding for additional coat shine and for providing a source of omega-3 fatty acids, oil may be the most suitable.

Linseed is not always the cheapest oil, but it contains significantly more Omega 3 oils and thus the results may outweigh the extra cost.

Check that any linseed oil you use has been cold-pressed, which ensures fats haven't been exposed to damaging heat and processing techniques.

How much to feed

How much to feed very much depends on the source of linseed chosen and the reason why it's being used. If whole or micronized linseed is being chosen for its overall ability to assist with weight gain, stamina or as an alternative to cereal grains then much larger amounts will need to be fed.

For example, for a 500kg horse its recommend that up to 800g* of micronized linseed be fed per day. If you are choosing it for skin/cost condition only, then that amount would reduce to around 400g per 500kg horse* per day.

If linseed oil is the form of choice then for weight gain, condition, stamina or as an alternative to cereals, around 300ml per 500kg* per day will be needed. For skin/coat condition only then 150ml per 500kg* horse per day will be enough.

As with all additional extras introduce linseed slowly over a period of 10-15days to allow the horses system to become adapt at using its nutritional components.

**Please note the above amounts are a guideline only and individual horses may require different amounts so do speak with a nutritional consultant before implementing.*

Conclusion

In summary, each form of linseed has pros and cons. Whole seeds are often the slightly cheaper option and resist oxidation but might not be fully absorbed and may possibly need to be fed in larger amounts. Ground can be less stable but is often better absorbed meaning less needs to be fed. Oil may be more expensive in some cases but is a more concentrated source of omega fats and is simple to store and use. Therefore, any one of these three forms could help improve the horse's coat quality and/or support condition and digestive health if fed in sufficient amounts.

References

- Dr David Marlin, 2019 www.davidmarlin.co.uk
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- Posted by Kristen M. Janicki, MS, PAS | Jul 15, 2019



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TESTIMONIALS

INNEKE THIRION

I have been feeding Epol for the past 30years. My horses include school ponies, competitive showjumpers and competitive Endurance horses. They all do exceptionally well on the Epol products and I think its great I can stick within one brand group and cover all my different needs.

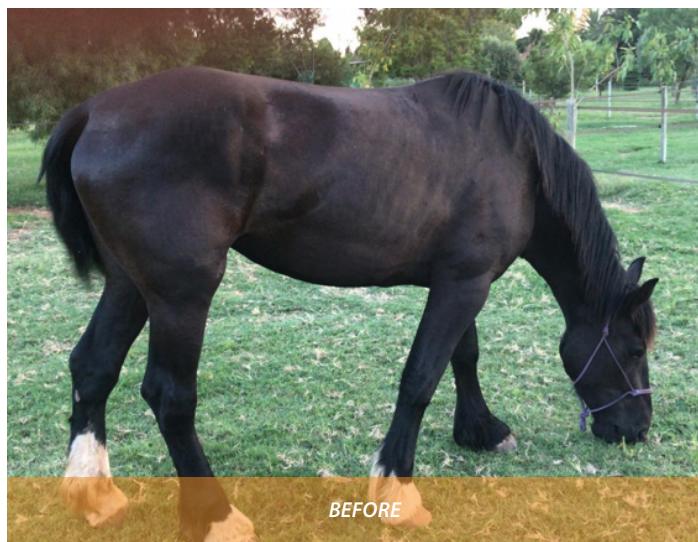
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JACKI KLEYNHANS

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Thank you to Equus for your help and guidance.



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