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MartinBauer Animal Nutrition

ADD VALUE WITH PSYLLIUM HUSK

BOTANICAL FACTS

PSYLLIUM
Plantago ovata

Target species	All animals
Target effect	Digestion, gut health, water-binding, feed homogeneity
Origin	India
Procurement	Cultivation
Used parts	Husks of the seeds

Prove of benefits

Feeding psyllium husks to animals can promote gut health through various modes of action. The husks are rich in soluble fiber, particularly hemicellulose, which undergoes fermentation in the gastrointestinal tract. Bacterial fermentation of soluble fiber produces short-chain fatty acids (SCFAs), such as acetate, propionate, and butyrate. These SCFAs serve as an energy source for the epithelial cells lining the gut, promoting their growth and proliferation, and maintaining gut integrity (McRorie et al., 2017). Dietary supplementation with psyllium husks has been shown to stimulate the production of mucin, a glycoprotein that forms a protective layer over the gut epithelium. Increased mucin production enhances the mucosal barrier function, preventing the penetration of harmful pathogens, toxins, and antigens into the gut wall and reducing the risk of inflammation and infection (Yang et al., 2014). A study conducted on male pigs supplemented with psyllium by Hoogeveen et al. (2021) found positive influence on both ileal and hindgut microbial communities and the fermentation in growing pigs. Montoya et al. (2021) supplemented growing pigs with psyllium husks and observed increased ileal and colonic mucus layer thickness.

Psyllium husks can modulate the composition and activity of the gut microbiota, promoting the growth of beneficial bacteria while inhibiting the proliferation of harmful pathogens. The soluble fiber in psyllium husks serves as a prebiotic substrate for beneficial bacteria such as Bifidobacteria and Lactobacilli, which produce metabolites with anti-inflammatory and immunomodulatory effects, contributing to gut health (Gibson et al., 1995). Mukhtar et al. (2017) found that psyllium included in the diet of laying hens showed a positive impact on egg mass and shell thickness and reduced the blood and egg yolk cholesterol levels. Psyllium husks have a remarkable water-binding capacity, forming a gel-like substance when hydrated. Increased fecal bulk enhances peristalsis and facilitates the removal of waste products and toxins from the gut (Cherbut et Michel, 2020). Kodithuwakku et al. (2021) studied psyllium as a fiber source on newborn female Holstein calves. The results showed an improvement in the hindgut environment, which leads to better growth during the early stage of life. Cannon et al (2010) also studied the effect of psyllium husk on Holstein calves and discussed the beneficial properties for nutrient utilization and gut health.

Active ingredients

- 20 to 30% mucilage in the epidermis of the seed husks
- Fiber:
  ~ 65% D-xylose
  ~ 20% L-arabinose
  ~ 8% D-galacturonic acid
  ~ 6% Rhamnose
  ~ 1% 4-O-methyl-glucuronic acid

Associated benefits

- Peristalsis-regulating
- Water-binding
- Antiphlogistic
- Anti-irritant

FORMATS


Cut


Powder


Blend


Extract


Tincture

Feed Safety GMP+ Assurance

FAMI QS

References

PSYLLIUM HUSK

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PSYLLIUM
Plantago ovata

Get in touch

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