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Vegan

**EXCELLENCE IN EQUINE NUTRITION** 





Complementary Feed for Horses Manufactured in Ire by: TRH, Ind. Est., Newbridge, Co. Kildare, Ireland.

# OMEGA3

100% VEGAN COMPLEMENTARY FEED FOR HORSES HIGH IN EPA & DHA MAINTENANCE OF COAT CONDITION, & JOINT MOBILITY.

# **OMEGA-3**

**OMEGA3** is a complementary feed for horses designed to support the maintenance of normal skin and coat condition, as well as maintenance of joint mobility. It is a 100% vegan product containing high levels of EPA and DHA from marine derived algae oil.

#### **OMEGA - 3 AND OMEGA - 6: A BRIEF INTRODUCTION**

Omega – 3 ( $\omega$ -3) and Omega – 6 ( $\omega$ -6) are long chain polyunsaturated fatty acids (PUFA's), membrane components of various cells providing structural integrity. Rendering key benefits through their metabolic conversions in the body, these macromolecules help streamline signalling pathways, immune and anti-inflammatory responses and regulate blood and heart vitals, to list a few.

The most widely researched  $\omega$ -3's are Alpha-linolenic acid (ALA), Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA), whereas the most widely established  $\omega$ -6 is linoleic acid (LA). Both these groups of PUFA's follow a very systematic, interdependent pathway in maintaining the general well being and homoeostasis in the body.

**Marine Algae Oil** is derived from *Schizochytrium sp.*, a rich source with high levels of EPA and DHA. Both of these have multiple health benefits.



#### GENERAL HEALTH

- Improved coat quality
- Better skin condition
- Improved respiratory function
- Improved joint function
- Support hindgut function

#### METABOLIC HEALTH

- Improved exercise endurance, tolerance and performance
- Improved reproductive health
  - Improved memory and learning

**Cold Pressed Linseed Oil** is a combined source of ALA ( $\omega$ -3) and LA ( $\omega$ -6). Both, ALA and LA are essential fatty acids and are transformed into EPA/ DHA and arachidonic acid (AA), respectively. They have multiple biological functions and act as obligatory precursors for molecules in various metabolic pathways.

**Rice Bran Oil** is rich in Gamma Oryzanol, and naturally occurring antioxidants in the form of tocopherols and tocotrienols. By preventing skin lipid oxidation and collagen degradation, it helps maintain skin tone and elasticity. It is a high energy food which is particularly suitable for feeding to horses to promote physical well-being and improve overall appearance.

**Vitamin A** - as a fat-soluble powerful antioxidant, it also supports healthy vision, skin, reproductive and immune functions in horses.

**Vitamin D3** - sometimes called as sunshine vitamin, becomes an important supplement for stabled and rugged horses with limited sunlight exposure. A fat-soluble vitamin, it also promotes bone mineralization by augmenting the absorption of calcium and phosphorous in order to maintain optimum bone density.

**Vitamin E –** The most important function of vitamin E is its action as a cellular antioxidant. Vitamin E removes free radicals formed in respiratory and cardiac muscles.





#### METABOLIC PATHWAYS OF OMEGA-3 AND OMEGA-6 FATTY ACIDS



#### OMEGA'S AND INFLAMMATION ANSHEL,2006

Metabolic pathways of  $\omega$ -3 and  $\omega$ -6 PUFA's both contribute to PGs (Prostaglandins) and LTs (Leukotrienes) formation, however the former producing anti-inflammatory molecules while the later producing pro-inflammatory chemicals. Conditions like Osteoarthritis and Dermatitis are associated with inflammation and pain at the site due to either huge migration or site-specific synthesis of pro-inflammatory PGs and LTs.

These PGs and LTs are formed from AA (Arachidonic acid), *in-vivo* synthesized from LA, at the tissue, using two important enzymes Cyclooxygenase (COX) and Lipoxygenase (LOX). Adequate levels of omega 3's like EPA and DHA act by:

- competing with AA thereby downregulating the formation of pro-inflammatory mediator PGs and LTs.
- blocks AA build up and downstream conversion (particularly EPA)
- producing anti-inflammatory PGs and LTs.



## **OMEGA3** Maintenance of Coat Condition, &

Joint Mobility

**OMEGA3** is a complementary feed for horses designed to support the maintenance of normal skin and coat condition, as well as maintenance of joint mobility.

#### **Instructions for Proper Use:**

Add to the normal feed ration; Adult Horses: 40ml. per day. Young horses and ponies: 20ml. per day.

#### **Composition:**

Cold Pressed Linseed Oil, Marine Algae Oil, Concentrated Rice Bran Oil (GammaOryzanol)

Additives	per 40ml
3a672b Vitamin A	37,184 iu
3a671 Vitamin D3	3,720 iu
Vitamin E	4 iu

#### **Analytical Constituents:**

Crude Protein <1%, Crude Fat 100%, Crude Ash <1%, Crude Fibre <1%, Linolenic Acid 42.5%, Linoleic Acid 13.3%, Eicosapentaenoic Acid 1.7%, Docosahexaenoic Acid 5.4%, Sum of EPA and DHA 7.1%, Ratio Omega 3/Omega 6 3.7

Keep out of reach of children. Store in a cool dry place away from direct sunlight.



### WHEN TO USE?

For enhanced skin and coat condition.

- As a source of quality slow release energy.
- For maintenance of normal joint function and mobility.
- Calorie dense non 'heating' feed oil.
- For stabled/rugged horses with limited access to sunlight and therefore lacking vitamin D.
- To aid normal digestive function.

