

MAXASCO



PROCESSED SEAWEED MEAL FROM ASCOPHYLLUM NODOSUM

MAXASCO products are based on seaweed meal from brown algae (*Ascophyllum nodosum*), containing valuable marine plant nutrients. These are released and made available to the animal by a unique processing technology. Moreover, **MAXASCO** is effectively binding mycotoxins and is available as well in combination with a binding agent as a mycotoxin binder.

MARINE PLANT NUTRIENTS

Algae are a broad variety of photosynthetically active organisms, that generate their biomass from carbon dioxide, water and minerals. Due to their maritime origin, algae are rich in macro- and microelements and vitamins. In addition, the brown algae *Ascophyllum nodosum* **MAXASCO** is based on, is rich in natural marine polysaccharides, such as Alginate, the β -Glucan Laminarin and Fucoidan. These components in synergy with marine tannins are known to have prebiotic and immune-modulating effects, while the sulfated polysaccharide Ascophyllan is particularly known for its antimicrobial properties.



MAXASCO

- *Ascophyllum nodosum* with valuable marine plant micro- and macroelements
- Prebiotic effect to stimulate immune system
- Enhances nutrient utilization



MAXASCO/FIX

- Algae based toxin binder
- High quality binding agent
- Effective binding of heavy metals and various mycotoxins

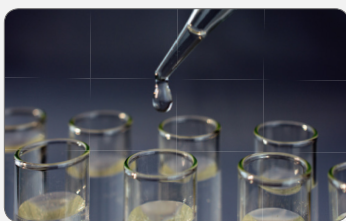
UNIQUE PROCESSING TECHNOLOGY

PROVITA SUPPLEMENTS has successfully introduced a novel technology, unlocking the full spectrum of activities of marine plant nutrients from *Ascophyllum nodosum*. After harvest from the Celtic Sea, the algae are processed carefully, undergoing a standardized swelling process and are ground and dried afterwards. The result is a granulated material with good mixing properties for convenient incorporation to any type of feed or premix.

Furthermore, the processing positively influences the rheological properties of the algae, as the soluble fiber components Laminarin, Alginate and Fucoidan are generally linked with absorption-, retention- and swelling behavior of the digesta, increasing its homogeneity and viscosity. Supplementation of **MAXASCO** facilitates the contact of feed components with digestive enzymes, helping to improve digestive performance.



Brown Seaweed—*Ascophyllum Nodosum*



Innovative Processing Technology



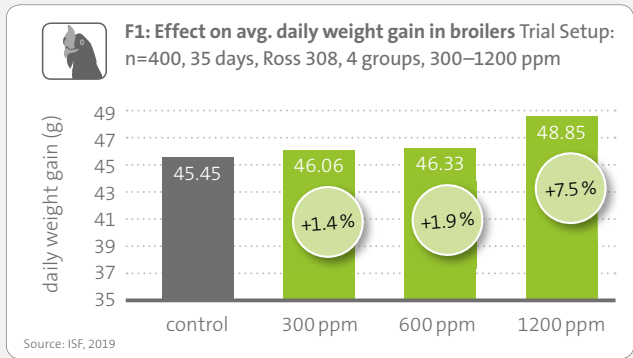
MAXASCO – Processed Seaweed Meal

PERFECT COMPONENTS. MAXIMUM RESULTS.

IMPROVED PERFORMANCE AND EFFECTIVE TOXIN BINDING

MAXASCO IN POULTRY NUTRITION

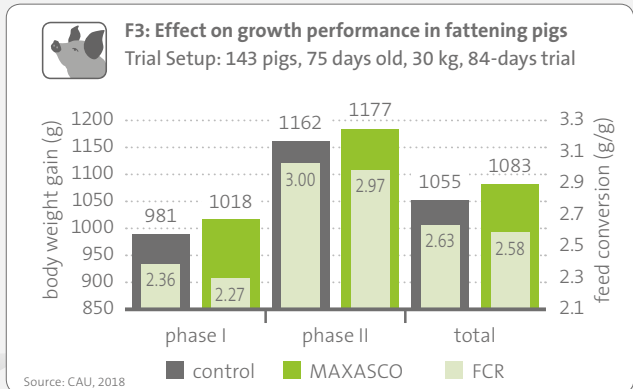
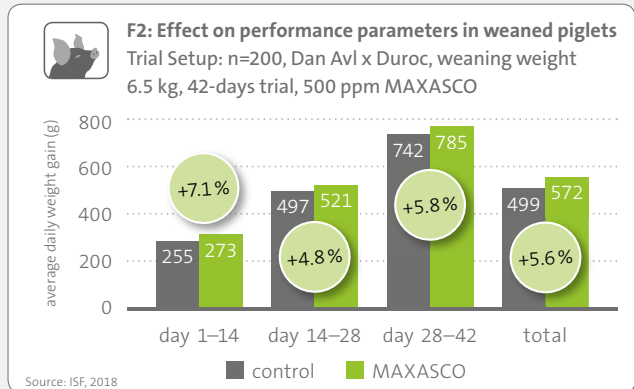
By improving homogenization of intestinal chyme, **MAXASCO** supports nutrient absorption from the feed. In a trial with 400 broiler chicks, fed with a starter diet from days 1 to 14 and a grower diet from days 15 to 35, **MAXASCO** was supplemented at different inclusion rates. Supplementation of **MAXASCO** clearly proved to have a positive effect on daily weight gain in broilers at all dosages, with highest gains at the highest dosage.



POSITIVE EFFECT OF MAXASCO IN PIG NUTRITION

In a feeding trial with weaned piglets, supplementation with **MAXASCO** at the recommended dosage led to an improvement of 5.6 % in average daily gain throughout the whole trial period (F2). Especially during first two weeks after weaning, supplementation showed to have positive impact on growth performance. Subsequently, **MAXASCO**

was tested in a university feeding trial with 75 days old fattening pigs (F3). Supplementation of **MAXASCO** significantly improved body weight gain and feed conversion during the whole period of the trial, even though both parameters were already on a high level.



MAXASCO/FIX

Even if present only at low concentrations in the feed, mycotoxins can cause chronic intoxications. Animals might not show symptoms, typical for mycotoxicosis, but performance is decreased. An in-vitro experiment was used to understand the toxin-binding capacity of **MAXASCO** and the bentonite inside **MAXASCO/FIX**. The experiment was conducted under conditions, prevalent inside the small intestines.

As shown in figure 4, both materials were able to effectively bind mycotoxins deoxynilavenol and zearalenone, which is known to be a toxin difficult to bind.

