Dear reader,

The new year has already been underway for a few of weeks, but we would still like to wish you all the best for 2019!

Numerous factors such as continuously changing legislation, public opinion and Brexit are issues that force us to look to the future and remain innovative. Stagnation equals regression. Therefore the compound feed industry keeps moving constantly and gives us plenty of challenges and opportunities. Getting off the beaten track generates new ideas and keeps the mind sharp.
The consumer needs to regain confidence in and respect for the agricultural sector. In order to gather support cooperation throughout the chain is key. Partnerships in the compound feed industry are a good example this.

E.F.S. has planned numerous projects for 2019 and we foresee that these will contribute to the development of our company in the Netherlands as well as abroad.

We are looking to the future with great confidence and we hope that you will enjoy reading our 27th newsletter.

Bert van Bremen

» EFS-01 off to a flying start!

Bespoke decontamination.

The new E.F.S. service, treatment of raw materials and feeds against pathogens in various locations by mobile installation EFS-01, is a great success. The first treatments were carried out in the autumn of 2018 and the results achieved were very positive according to E.F.S.-Holland's technical department.

With this unique service customers do no longer require a built-in fixed installation in a mill. Thus E.F.S. offers more flexibility to its clients.

"Decontamination does not just entail the addition of a product such as Bact-Aid™. It is vital to determine the correct dose and correct dosing point and the method that suits the customer. The correct concept is therefore always developed in consultation with the user."

On the basis of a well thought out, thoroughly discussed action plan and open calculation treatment is discussed with the customer in order to get it started as soon as possible.

Interested in our new service? **Contact us** to

» Newssection

» Salmon oil prices

Due to the very hot summer we saw a higher salmon mortality rate, leading to a tightness in the fish oil market in Q3 2018. At the end of Q3 2018 the availability of salmon oil increased. In Q4 2018 the market prices showed a slight rise and now, at the start of 2019, the market seems stable.

» E.F.S. travels abroad

During the final quarter of 2018 foreign travels prevailed at E.F.S. As part of Secure Feed Audits we visited Schotland, a visit with customers took us to our salmon oil supplier in Norway and in November EuroTier (the largest European agricultural fair) was our team's home base for a week.
Our Norwegian tour included, among others, visits to a salmon farm, a salmon slaughterhouse and our salmon producer. It is important to E.F.S. to be open about the production process, so customers can form their own picture of the production of Norwegian salmon oil. There was also time to enjoy the natural and cultural beauty of Norway.
We would like to thank our suppliers once again for their hospitality!

» Trade Fairs

In the past few months E.F.S. took part in **EuroTier** in Hannover, Germany (13-16 November) and **RMV Hardenberg**, The Netherlands (30 October - 1 November). These were rewarding days once again, during which we received many contacts at our stand and expanded our network. In 2019 E.F.S. will take part in **Agrar Unternehmertage** in Münster, Germany (5-8 February) and new fairs: **Dutch Poultry Expo** (19-20 March) and **Dutch Pork Expo** (16-17 April). We will also take part in **Victam** on 11-14 June.

Inspireert de pluimveehouder DUTCH POULTRY EXPO 2019

We hope to meet you there!

» E.F.S. builds on!

In preparation for the upcoming expansion of E.F.S. extensive refurbishment is taking place on the premises.

» Vacancy /strengthening our sales team

At the moment we have a vacancy for the position of **Account- Businessmanager export**. For further information, please use this link.

» Ethoxyquin in salmon oil

E.F.S Norwegian salmon oil contains ethoxiquin. In Regulation 2017/962 it was decided to suspended the authorisation for the use of the antioxidant ethoxyquin. As a result the use of ethoxyquin in salmon oil production is authorised until 1 October 2019, salmon oil containing ethoxyquin is allowed be sold until 1 January 2020 and

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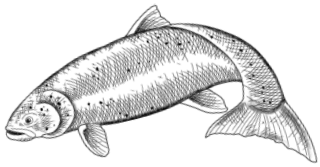
» Salmon oil and the facts

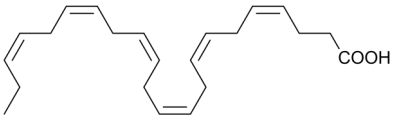


You may have heard or read this through advertising channels: `Are plants the new cows?'. This widely used slogan by a major consumer goods supplier from the Benelux responds to the current trend of eating more plant based food or becoming flexitarian. This trend also seems to slumber in feeds. For E.F.S., being a salmon oil/fish oil supplier, the question arises: "Can salmon oil/fish oil be substituted by vegetable oils?"

The concise scientific answer is `no'.

Fatty acids

Plants naturally contain only one omega-3 fatty acid, i.e. alpha-linolenic acid (ALA: C 18:3). Fish on the other hand extract several omega-3 fatty acids from feed, including some essential fatty acids such as eicosapentaenoic acid(EPA: C 20:5) and docosahexaenoic (DHA: C 22:6), which algae and plankton produce by means of photosynthesis. This leads the formed omega-3 that has been formed further down the food chain. By eating fish humans also become part of this chain. For centuries fish has been eaten to promote good health (fish on Friday), including filets, but of course also the well-known cod liver oil.



DHA

Nowadays eating meat/fish is under intense scrutiny and is also mentioned in the climate agreement. The food sector suggests we can get sufficient nutrients, including omega-3, from plant products. One of the assertions made is 'Are plants the new cows?'. It overlooks the fact that vegetable oils only contain the omega-3 fatty acid alpha-linolenic acid and not EPA and DHA. Now it happens to be the case that humans and animals are able convert alpha-linolenic acid into EPA and DHA, but various studies show that conversion into the essential fatty acids is very limited. Hussein et al. (2005) have shown that ALA can only form 0.3% EPA and <0.01% DHA.

Exactly EPA and DHA are the polyunsaturated fatty acids that offer many health benefits. In the current human and animal dietary pattern the omega-3:omega-6 ratio is out of balance. An optimal ratio is 1:5, however often this ratio is over 1:10. This leads to an rise in inflammatory reactions, reduced fertility, and an increased risk of cardiovascular diseases and skin problems. Recent field research by E.F.S. shows that the use of 1% E.F.S. Scottish fish oil in sow feed generates an average number of 1.2 piglets born alive per litter (2018).

Therefore it can be stated that fish and fish oil are not fully interchangeable with plants and vegetable oils. For health purposes it remains important to consume fish products as a source of omega-3.

Sustainability

The additional question that arises when mulling over the assertion `are plants the new cows.' is: `Is the substitution of fish oil by vegetable oil a sustainable alternative?'.

As a result of overfishing in the past and insufficient availability of wild fish many farmed fish are produced and consumed today. By the introduction of current systems and certifications (such as MSC and ASC) fisheries have been regulated in a responsible and more sustainable manner. Also fish farming under strictly controlled conditions is very efficient, among others due to a very low feed conversion.

In the past fisheries would dump viscera at sea, which had and still has a negative effect on the environment. Current legislation includes the provision that viscera need to be landed. E.F.S.'s suppliers convert these viscera into a high-quality oil and protein.

In doing so a waste stream from the food sector is processed in the feed sector and thus a contribution is made to sustainable and healthy livestock farming.

"inspired by Nature, scientifically proven"