

Dear Reader,

Hereby we present to you, the 13th edition of our newsletter.

In this newsletter, you can read about:

- The effects of **Tox-Aid[®]** on the performances of piglets
- E.F.S.-Holland on Dutch **television**
- **Eurotier 2014** in Hanover
- The results of a trial with **Salmon oil** and sows
- A trial with **Nutri-C[®]** to replace choline chloride in a poultry diet

In addition, we will discuss the price developments on the fish oil market.

Kind regards,

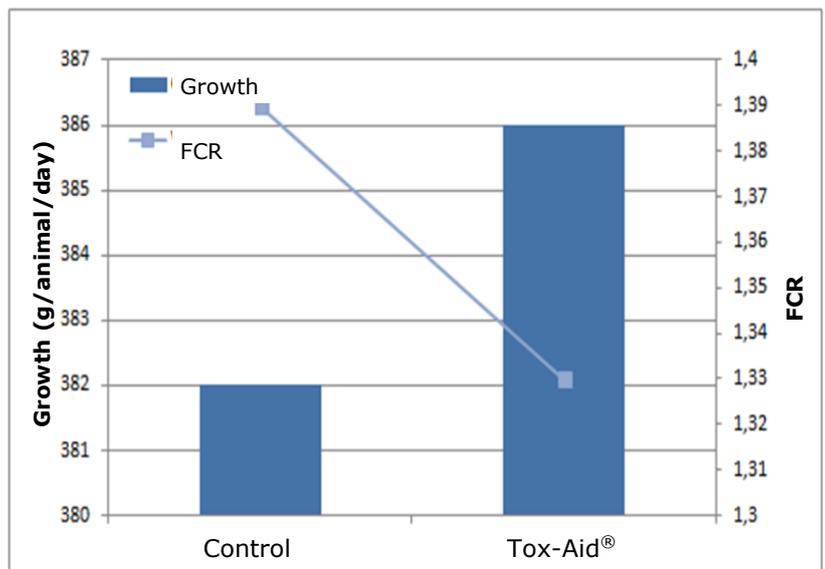
The team of E.F.S.-Holland

► Effects of Tox-Aid[®] on the performances of piglets

Tox-Aid[®] is a mixture of inactivated yeast, bentonite and plant extracts. The aim of the product is deactivation and binding of mycotoxins in the digestion tract of the animal.

A trial was performed with Tox-Aid[®] in piglet feed. A diet was used which was high in DON and ZEA. The trial feed consisted of this diet with an addition of Tox-Aid[®] (2 kg/t). During the trial the weight, growth and feed conversion ratio was monitored and calculated.

The following graph shows the results of the trial. The group fed with an addition of Tox-Aid[®] had a higher growth and a lower feed conversion ratio compared to the control group.



► Eurotier 2014

Between 11 and 14 November Eurotier 2014 took place in Hanover, Germany. It was a successful exhibition.

We would like to thank all of the (international) visitors to our booth.

The following exhibition where E.F.S.-Holland will be present with a booth is Victam 2015 in Cologne from **June 9-11**.

► E.F.S.-Holland on Dutch television

On **October 5th** the Dutch television program 'Ondernemend Nederland' showed an item on E.F.S.-Holland.

During the show, the viewer was given an idea of our company. Besides this, the program showed current developments and also future plans of the company.

The show is now available on [our website](#), with subtitles when requested.



**E.F.S. wishes
you a happy
2015**

► Effect of Salmon oil on the performances of sows

Salmon oil produced from salmon reared for human consumption. Salmon oil is a source of Omega-3 fatty acids EPA and DHA. The fatty acids stimulate the production of prostaglandin PGE₃. PGE₃ plays a role in strengthening bones and in improving the immune system and fertility.

A trial was performed in which salmon oil was added to sow feed (0,5% in gestation diet and 1,0% in lactation diet). The trial was performed with more than 11.000 sows. Several parameters were measured such as born and weaned piglets and the number of re-inseminations.

The following table shows the results of the trial. The table shows the difference in percentage of the trial group compared tot the control group.

Results of the trial:

The number of stillborn piglets decreased with **10%**.

The number weaned piglets increased with **4,5%**.

The percentage culled sows per year decreased with **12%**.

Parameter	%*
Life born piglets/cycle	+ 1,89
Stillborn piglets/cycle	- 10,0
Piglet losses from birth until weaning	- 2,6
Number weaned piglets/cycle	+ 4,3
Number weaned piglets /sow/yr	+ 4,5
Re-inseminations	- 4,0
Culled sows/yr	- 12,0

* Relative change compared to control

► Nutri-C® as a replacement of Choline Chloride

Nutri-C® is a mixture of organic acids with a source of betaine. The organic acids can prevent (re) contamination of feed with e.g. the Salmonella bacteria. Besides this, betaine plays a role in the energy metabolism by regulating osmosis mechanism. Besides this, betaine is a methyl donor. Nutri-C® is produced for both pig and poultry diets.

In this trial, it was tested whether Nutri-C® could replace choline chloride. Broilers with the age of 6-34 days were used in this trial and divided into 2 groups.

Group 1 received a choline deficient diet (control diet). This meant that the essential need of choline was covered, but the need for methyl groups was not completely covered. Group 2 was given a diet with choline chloride (500 ppm) and group 3

received a diet with betaine (500 ppm or 7kg/T Nutri-C®).

The former table shows the effect of the three diets. There are no significant differences between group 2 and 3 in growth or FCR.

In this trial, choline chloride could be replaced by Nutri-C® (1:1) without effecting the performances of the broilers.

	Growth	FCR
Control diet	1755	1.64
Choline (Chloride)	1803	1.59
Betaine (Nutri-C®)	1775	1.60

► Fish oil market

After a long steady period, the fish oil prices went up a small percentage.

The final report of IMARPE is not yet ready. Early report indicated to many juveniles which would indicate that circumstances are not optimal for large quota. If decided this way, fish oil prices will rise. Until this report is published it will be uncertain what the price will do.

