

Dear Reader,

Here is the 20th edition of our newsletter.

In this edition you can read about:

- **Masked mycotoxins**
- **News:**
 - **Salmon oil prices**
 - **New source of omega 3 from E.F.S.**
- **Seminar: Register now!**
- **ActiBeet[®] latest results**
- **E.F.S. beyond borders**
- **NEW BREAKTHROUGH with Tox-Aid[®]**
- **And, our final topic: trade fairs**

With best regards
The E.F.S. team.

» News

• Salmon oil prices stabilise

Partly driven by the rising demand for salmon oil from Asia, salmon oil prices increased during 2016. In the second half of 2016, the price rise was unexpectedly sharper than in the first six months of 2016. Following the increases in 2016, E.F.S. is noticing stagnating prices at the start of 2017. Whether this will lead to falling prices is uncertain and depends on factors such as the new fishing season in northern South America.



• NEW: E.F.S. Scottish fish oil

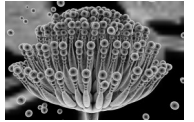
E.F.S.-Holland is launching a new source of omega 3 onto the market. This high-quality E.F.S. Scottish fish oil is complementary to the current range of Scottish and Norwegian salmon oils. E.F.S. Scottish fish oil is produced from predominately Scottish salmon. With this additional source E.F.S. hopes to fulfill the growing demand for high-quality fish oils.

• SEMINAR

On 16 February, E.F.S.-Holland is organising the seminar: 'Animal Husbandry ; the balance between emotion and efficiency.' Register? See the [website](#) or mail: seminar@efs-holland.nl

» Tox-Aid[®]: Masked Mycotoxins

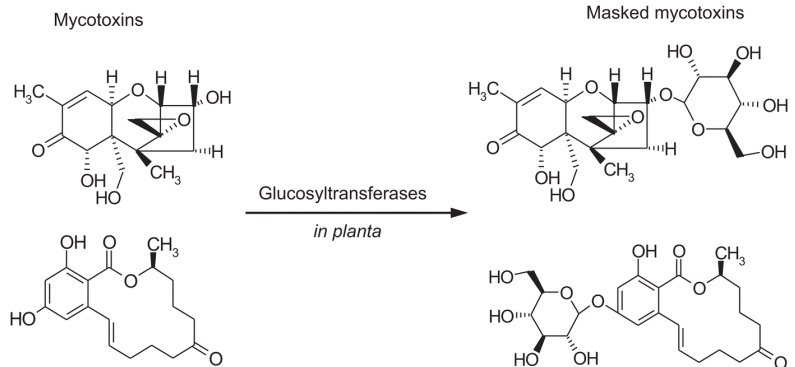
E.F.S. believes that nature has a solution for everything. Mycotoxins are part of a natural process and it appears that masked mycotoxins are present in crops, feed materials and feed. Maybe you have already heard the term 'masked mycotoxins'. E.F.S. will explain it in more detail.



In addition to the much-analysed mycotoxins such as AFLA, DON and ZEA, masked mycotoxins also exist. Masked mycotoxins are forms of mycotoxins that are transformed/ deactivated by the plant itself as a form of self-protection. During this process, a plant can, for example, bind a saccharide to a mycotoxin. With field fungi, mycotoxins are formed during crop growth and the plant attempts to protect itself from these mycotoxins. Therefore mycotoxins originating from *Fusarium* fungi are most susceptible to transformation into 'masked mycotoxins', as the *Fusarium* fungi is a field fungi.

Examples of masked mycotoxins are DON-3-Glc (deoxynivalenol-3-glucoside) which is formed from DON and the formation of ZEA-14-Glc (zearalenone-14-glucoside) from ZEA.

Laboratories are not yet able to analyse all (masked) mycotoxins. Some 'masked mycotoxins' can already be detected and analysed, but in this



case the term 'masked' no longer applies.

In the majority of identified, masked mycotoxins, the active part of the mycotoxins appears to be intact. It is this active part that causes the negative, harmful effects of mycotoxins in humans and animals. Tox-Aid[®] can de-activate and 'disarm' the active part of mycotoxins and is therefore also effective against masked mycotoxins.

It appears that certain masked mycotoxins are less powerful than unbound mycotoxins, as the growing plant had already started deactivating the mycotoxins. The process of transformation can also mean that masked mycotoxins are in fact more harmful than the original form. In addition to these negative traits, some masked mycotoxins are retransformed into their original state in the body, a process that is mainly attributed to colon bacteria. Further research must clarify the risks that masked mycotoxins pose to animal health.

Tox-Aid[®] also deactivates masked mycotoxins via a combination of the right bentonite, inactivated yeast and herbal extracts. Hereby Tox-Aid[®] will combat the negative consequences of (masked) mycotoxins.

Questions? Please feel free to contact the E.F.S. team.



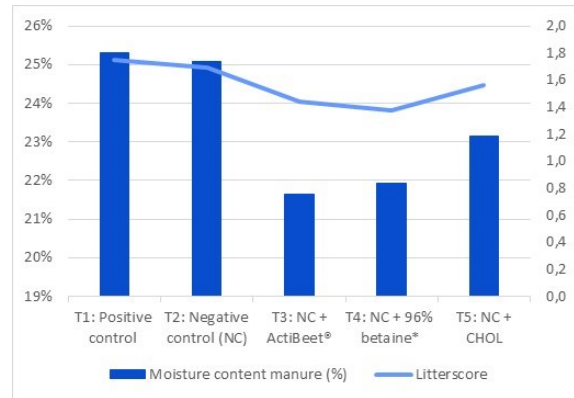
» ActiBeet®: latest results



Recent research performed in Thailand by Agrana has revealed that, in addition to its well-known effect as a methyl donor and osmolyte, ActiBeet® also has the ability to increase the amount of breast meat in broilers and reduce the percentage of abdominal fat.

This study also showed that ActiBeet® improves the intestinal health and litter score of broilers. This offers financial advantages and improved animal welfare. The study had five trial groups: a positive control, negative control (NC: LOW ME) and three groups (NC) with the following components: ActiBeet® liquid 40% (T3), 96% crystalline anhydrous betaine (T4) and choline chloride (T5).

The graph below illustrates the different litter moisture content and litter score (1 good; light brown and quite dry, 2 fair; brown color and quite wet, 3 poor; dark brown and wet).



» E.F.S. beyond borders

Bulbarn

At the end of October 2016, E.F.S. opened its doors for the second time that year for its agent and customers from Bulgaria. Bulbarn is the agent for E.F.S. in Bulgaria since 2010. The directors of Bulbarn concluded that the day was highly efficient.

According to Matty van Tilburg, the topic of mycotoxins was very well received. Mycotoxins were explained in detail followed by an explanation of the consequences for pigs. A mycotoxin-free world is unfeasible as mycotoxins are produced by fungi, some of nature's biggest 'housekeepers'. This was followed by a presentation that went into greater detail on the working of Tox-Aid®, the mycotoxin deactivator from E.F.S. The morning ended with a generous lunch, including traditional Dutch meat croquettes on bread.



Agrana

In the autumn of 2016, E.F.S. paid a visit with some of its customers to Agrana, producer of the GMO-free source of betaine: ActiBeet®.

During the visit the production process of this fine alternative to choline chloride and synthetic betaine was examined in detail. The latest results relating to production and research were also shared with the group.

Betaine is widely applicable for all animal species. For more information, please feel free to contact the E.F.S. Team.



» BREAKTHROUGH: Mycotoxin deactivation in liquid feed

Tox-Aid® is capable of deactivating mycotoxins in animals. Research conducted by independent, leading laboratories has now demonstrated for the first time that Tox-Aid® deactivates mycotoxins in liquid feed.

In concrete terms, this means that animals can be protected against the negative effects of mycotoxins before intake of the liquid feed. More information? Please contact your contact person at E.F.S.



» Seminar

On 16 February 2017 E.F.S. will organize the seminar; 'Animal husbandry; the balance between emotion and efficiency.'



The livestock sector has seen massive developments in recent decades, and animal husbandry has become much more efficient. In the past decade there has been a greater focus on the importance of the emotional aspects of animal husbandry. But where does the balance lie between emotion and efficiency? Today and tomorrow? During this seminar, you can join E.F.S. in finding the answers. We look forward to seeing you on 16 February at the Van der Valk hotel in Hengelo. Register now for the [Seminar!](#)

» Trade fairs 2016/2017

E.F.S. exhibited at EuroTier 2016 from 14-18 November 2016. It was a very successful and fruitful event.

We would like to thank the many national and international visitors for visiting our stand.

In March E.F.S. will participate in the exhibitions [RMV](#) (7-9 March) and [LIV](#) (14-16 March) in Venray. We are looking forward to seeing you there.

