



# Dif'Letter

Become an expert in animal nutrition too

January 2025

**Winter and  
its challenges:**  
boost your animals' immune  
defences

**Difagri**  
expert in animal nutrition



We are already ending 2024 with a great project dynamic that places 2025 under very good prospective.

A year marked by the continuation of our efforts concerning the ramp-up of the industrial tool. Significant investments associated with organizational improvements will have made us cross an important milestone in terms of flexibility with in particular the arrival at the beginning of the year of the KSE micro-dosing system and new packaging equipment. 2025 will be part of the continuity of this approach with a proactive investment plan to realize new optimizations and capacity increases.

At the same time, we have also completed a first structuring strategic merger with the acquisition of NEOFEED which has made it possible to strengthen our R&D process with first-rate expertise (formulation, zootechnical approach, galenic mastery, etc.) and broadened to a species scope very open to monogastrics (and beyond...). A new product performance testing program is validated on innovative themes.

While capitalizing on our technical seniority in ruminants, we will continue to highlight our know-how in poultry (the leading species represented among exported products) and swine with a series of new, strongly branded products that will be launched in line with the presentations made at Space and Eurotier.

It is very important to me to recall that all of our initiatives and our corporate project remain inseparable from our ESG project. It affirms our desire to decarbonize our activities, our contribution to sustainable zootechnical performance in livestock farming and our commitment to playing a role in the personal development of our teams but also of the territories in which we operate (in France and abroad).

In summary, we are approaching 2025 in a spirit of strength of proposals to serve our partner customers. I join all of our teams in wishing everyone a very happy new year.

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# Vitamin E + Selenium, the winning duo

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Vitamin E and selenium in livestock farming: an essential duo! These two elements play a crucial role in providing antioxidants and immune support throughout the animal's life cycle.

## Vitamin E :

### 📌 General :

Vitamin E has long been identified as the fertility vitamin. Vitamin E is the generic name used to describe the different tocopherols.  $\alpha$ -Tocopherol is the form most commonly found in nature. Both wheat germ and sunflower oil are very rich in it.  $\alpha$ -Tocopherol is stored in the chloroplast of plants. Green plants are therefore rich in vitamin E.

### ⚙️ Nutritional function :

Vitamin E plays a major role as an intracellular and intercellular antioxidant. It prevents the oxidation of unsaturated fatty acids and therefore contributes to the integrity of cell membranes. As well as blocking the production of free radicals. It also plays a role in supporting the immune response. Vitamin E is absorbed with lipids in the small intestine. The  $\alpha$ -tocopherol form is the circulating form in the blood and tissues of animals.

### ✅ Benefits :

Reproduction, prevents tissue deterioration, stabilises fats (milk, meat, eggs).  
A maximum daily dose is suggested: 75 IU/kg body weight.

### ❌ Deficiencies :

Dystrophy, fertility problems, poor immune response.

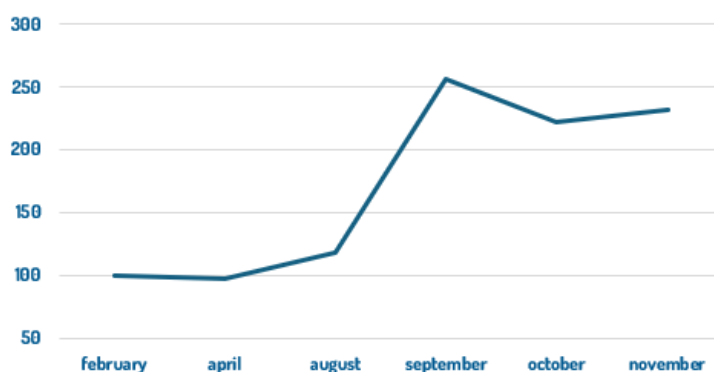
### 📝 Recommendations for use :

The natural contributions via the raw materials that make up the feed of farm animals are not sufficient to cover their needs. It is therefore necessary to supplement the animals. Vitamin E has no regulatory maximum levels of incorporation and there is no known toxicity (up to 75 mg/kg live weight/animal/day).

### 📊 Market trends :

Following a major fire, BASF, a major player in the production of vitamin E, declared force majeure in the summer of 2024. Volumes were drastically reduced to meet the needs of all their customers. This created severe tensions in terms of supply and prices. The graph opposite shows a significant change in prices over 2024. At present, the price trend will remain firm, a priori until BASF reopens in July.

Vitamin E trend in 2024, base 100



Market &

expert en diététique

## General :

Selenium is closely linked to vitamin E as a biological antioxidant. While selenoamino acids are the main selenium compounds in plant-based foods (oatmeal, wheat germ), inorganic salts are widely supplied to animals via mineral mixtures.

## Nutritional function :

Selenium is an essential element whose biological functions are carried out by specific selenoproteins / selenoenzymes. The main functions of selenium are as follows: Antioxidant / Good thyroid function / Maintenance of cellular redox status (cellular defences) / Detoxification of heavy metals and certain xenobiotics (polluting chemical molecules)

## Benefits :

Reproduction, natural antioxidant, boosts immune response.

## Deficiencies :

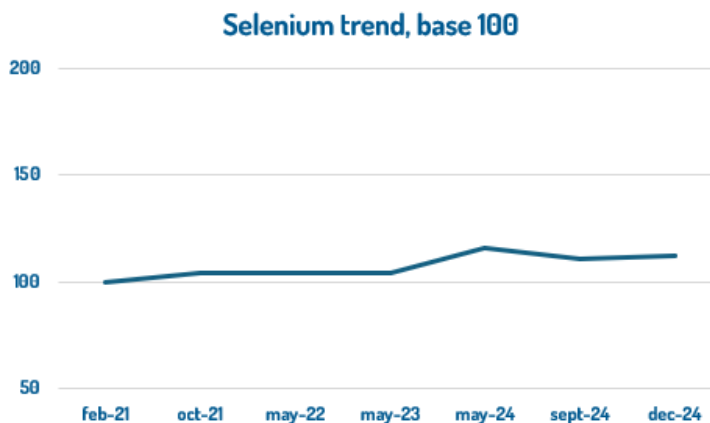
Muscular dystrophy, reproductive disorders, low growth rate.

## Recommendations for use :

As the selenium needs of farm animals are not covered by raw materials, it is necessary to supplement with selenium of organic or inorganic origin. The regulatory maximum for selenium is 0.5 mg/kg of feed (including a maximum of 0.2 mg/kg of organic selenium). This element rapidly becomes toxic for animals, and overdosing should be avoided.

## Market trends :

The need for selenium is growing. Selenium is used in a variety of medical, agricultural, food supplement and industrial applications. Selenium is mainly a co-product of copper. It is found in very small quantities in most sulphides. It is extracted mainly from copper refining residues (sludge from electrolysis cells) and secondarily from nickel mattes. The extraction of these metals determines the availability of selenium on the market, which can lead to tensions in terms of irregular supply and price volatility. In recent years, however, prices have remained fairly stable.



# Well-prepared farm<sup>5</sup>



## Understanding immunity

Immunity in livestock farming is not usually given much thought, but it is **one of the essential factors in successful herd management**. It can be a complex subject, but it is essential for the health and well-being of the herd, and for food safety.

It depends on several factors, including species, age, environment, feed and exposure to pathogens.

There are **2 types of immunity: innate immunity** is the first line of defence against infection. It is present from birth and includes physical barriers (skin, mucous membranes), chemical barriers (enzymes, acid pH) and cellular barriers (macrophages, neutrophils). There is also **adaptive immunity**, which is more specific and acquired after exposure to pathogens or by vaccination. It involves T and B lymphocytes and antibodies.

Immunity develops throughout an animal's life. But it can sometimes fail. Certain pathogens, such as viruses, can directly weaken the immune system.

**There are several factors that can influence immunity in animals:**

- **Genetics:** certain breeds or lines of animals are more resistant to disease.
- **Diet:** balanced nutrition is crucial. Deficiencies in minerals (zinc, selenium, copper) or vitamins (A, D, E) can weaken the immune system.
- **Environmental management:** a clean, well-ventilated and appropriate environment reduces stress and infection.
- **Stress:** due to changes, transport or poor husbandry practices can reduce immunity.

To combat diseases that can sometimes spread rapidly through a herd, **animals can be vaccinated**. Vaccination protocols vary according to species and geographical region. Vaccination is a key tool for boosting adaptive immunity and preventing common diseases.

Some DIFAGRI products help support a healthy immune system.

Full article on our website

• • • **Read more** 



# Our favourites<sup>6</sup>

**DIF'IMMUNITÉ / DIF'ALLAITANT** are low-temperature granulated products designed to **boost immunity** during the vaccination period and before calving in **large and small ruminants**. They **limit stress** during this period, as well as the **physiological hazards** frequently encountered in newborns with low immunity.

These **'special immunity' granules** contain trace elements, vitamin E and selenium.

## DIF'IMMUNITÉ DIF'ALLAITANT



## GRIVAL



**GRIVAL** helps to anticipate and support immunity during **respiratory illnesses**.

**GRIVAL** contains a **core of plants** to support animals during the winter months. **Vitamin C and vitamin E** help with reproduction, blood circulation and the nervous system, while **clay** helps to eliminate toxins.

In short, **GRIVAL** can be used to cope with winter challenges (seasonal stress).

**DIFADIGEST** is a liquid complementary feed for pigs and poultry, specially formulated to **optimise the digestive status of the animals**. Composed of an **emulsion of fatty acid triglycerides, organic acids, yucca** and a **phytogenic core**, it encourages the establishment of a favourable microbiota, helping to **improve digestive integrity**. Its unique formulation helps to **limit inflammation and optimise intestinal absorption**.

**DIFADIGEST** can be used as soon as the batch is put together to positively orientate the intestinal flora, but also as **support during dietary transitions** or to cope with difficult situations.

## DIFADIGEST





**Hubert THIEBAUD**  
**Somme (80), FRANCE**

« 2 years ago I had a major bout of flu in the herd. The cows started coughing in one building and then the flu spread to the other buildings on the farm. It stopped the growth of the 2-year-old heifers and the bull calves. I had to give antibiotic injections to the whole herd and I lost a 1-year-old grazer.

This year I used GRIVAL on the calves and yearling heifers as soon as the flu symptoms started. I used it twice, 1 month apart during the winter, with good results. The animals quickly stopped coughing after using GRIVAL. Next year I'll be using this product as a preventive measure. »



What customers say



# Dif'actus

A look back at the highlights of the Difagri team



## EUROTIER 2024

We took part in the EUROTIER trade fair, which was held from 12 to 15 November 2024 in Hanover, Germany.

It was an opportunity for us to meet potential European customers. Cédric DE BOULOGNE, CEO, and Olivier PIVETEAU, Technical Director, were able to discuss Difagri products and new innovations.



## OVUM 2024

Our export sales manager, Josselin Bertaud, was at the OVUM trade fair in Punta del Este, Uruguay, from 12 to 15 November.

It was a unique opportunity for him to present Difagri products and also to talk about the new monogastric range at this trade fair dedicated to poultry products.



## Nos FABuleuses

The Terres de Montaigu local authority organised this event for jobseekers from 21 to 25 October 2024.

It was an opportunity for Difagri to open its doors to external visitors and employees' families, so that they could find out more about the jobs we do.

A great opportunity to share!



## Difagri's christmas

The whole Difagri team got together on the evening of 19 December to celebrate the festive season with a drink.

Employees were invited to wear their best Christmas jumper.

It was a great time of sharing and conviviality!



## SEEPH visit

On 22 November, we were honoured to welcome the Prefect of the Vendée and the Supported Employment scheme for the European Week for the Employment of People with Disabilities.

It was an opportunity for Nathalie BAUDRY, who benefits from the scheme, to present her different jobs.



As it does every year, Difagri is taking part in the Joséphine event and making a donation to «Action contre le Cancer».

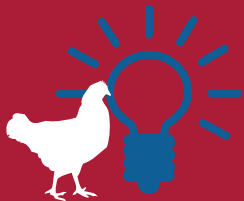
This year, 14 people from people from the company got involved despite the bad weather.

# Did you know ?

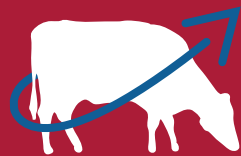


**Sheep have incredible memories!** They can recognise and remember more than 50 faces of other sheep and humans for at least two years. Their ability to recognise faces is comparable to that of primates, making them far more intelligent animals than you might think.

They can also detect whether other sheep or humans are happy, sad, stressed or calm by reading facial expressions.



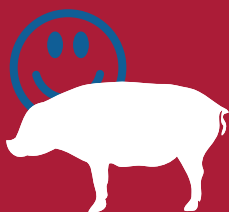
INNOVATION



PERFORMANCE



PASSION



ANIMAL WELL-BEING



ATTENTION & SUPPORT



PERSONNALIZATION



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