

# for a better life



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#### OLMIX GROUP PHILOSOPHY

As a specialist in marine biotechnology, Olmix Group brings natural sources of nutrition and good health to plants, animals and people, for a complete and consistent food and health chain.

The Animal Care division of Olmix group places the animal at the interface of 2 major ecosystems: the external (housing,

litter, air ...) and the internal (body, bacterial flora, nutrients, toxins ...). Both influence each other and their balance will determine animal performance. Olmix Animal Care addresses these two ecosystems with a range of solutions specifically designed for the farmer, the veterinarian or the feed miller. Goal: to reach «antibiotic free» production



while improving farmers profit and animals well-being, thanks to algae.

«The European trend of "healthy eating", born 20 years ago, is growing and spreading worldwide. By providing a health value to the milk, the eggs, the meat or the fish, the producer will secure his income.

Olmix Group definitely commits to work on the creation of a healthy food chain, THANKS TO ALGAE!»

Hervé Balusson, founder and CEO of Olmix Group.

-ocal regulations should be consulted concerning the status of these products in the country of destination.

All information only for export outside Europe, USA and Canada.

**1995** • *Headcount: 4* Creation of Olmix by Hervé Balusson

Extracting value from the by-products of copper.

Palmaria palmata

"litter conditioner"

of the Mistral® brand

**1997** • Headcount: 15 • Revenue: 3M€

November 2001 European trophy for animal welfare March 2002 Creation of an R&D department

Creation of the Animal Care range. Launch of the MonaLisa (Eureka) program.

*First "litter conditioner". First use of clay as a natural alternative to chemical treatment.* 

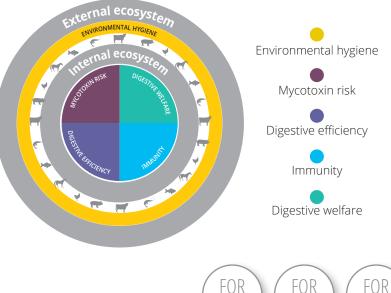
Creation

Introduction of the innovative Mistral<sup>®</sup> concept.

#### **FIVE FUNCTIONALITIES,** FOR COMPLETE PROGRAMS FOR ANIMALS

Through innovations issued from algae, Olmix Animal Care has developed a full range of solutions acting on the 5 key factors influencing the welfare and the performance of livestock animals.

Olmix Animal Care offers solutions which improve the hygiene of the animals by reducing the environmental humidity, enhance their immune defenses, guarantee the digestive welfare, increase the digestive efficiency and fight mycotoxins present in the feed. This global strategy contributes to reduce the use of antibiotics, to support the fight against antibiotic resistance and also to improve the quality of the final product.



#### **INVOLVE ALL THE STAKEHOLDERS**

Olmix Animal Care has developped products to be used or distributed by all the stakeholders in livestock breeding.

#### NATURAL INNOVATIVE SOLUTIONS SINCE 1995

The desire to provide natural alternatives to agricultural additives led to the creation of Olmix Group in Bréhan, at the heart of Brittany, in 1995. Within more than 20 years, the company has become one of the major global specialists in marine biotechnology and green chemistry.

#### **Environmental hygiene**

Olmix's journey first started with the sourcing of trace elements. Being in the husbandry business, the idea soon grew to produce natural solutions for agriculture, giving rise to innovations which gave birth to the first environment safety tool of the group: MISTRAL<sup>®</sup>.

#### Mycotoxin risk, digestive efficiency and welfare, immunity...

The journey continued with a research program called MonaLisa, seeking solutions to one of the major threats to animals: mycotoxins. MT.X+<sup>®</sup> was born from the association of micronized clays and algae extracts. It

was soon followed by MFEED<sup>®</sup> and MFEED+<sup>®</sup>, products designed to improve digestive efficiency.

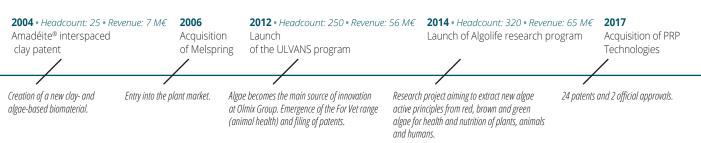
Farm

FFFD

VFT

Olmix Group is now entering the molecular dimension with a new generation of products born from ULVANS & ALGOLIFE research programs aiming to isolate algae active principles and find new associations to cover all husbandry challenges: SEAGUT<sup>®</sup> PASTE, SEAGUT<sup>®</sup> POWDER, SEALYT<sup>®</sup>, DIET<sup>™</sup>, SEARUP<sup>®</sup>, DIGESTSEA<sup>®</sup>, Z'LICK<sup>®</sup>, STIMUL'Z<sup>®</sup>, BLUEWATER<sup>®</sup>, MINERALG<sup>®</sup>, SEABIOTA<sup>™</sup> and ALGIMUN<sup>®</sup>.

Algae is a great source of «blue biotechnology» which constitutes, for Olmix Group, the base of development of the next years.





#### **INNOVATION** IS AT THE HEART OF OLMIX GROUP

Dedicated teams and the company's R&D division comprise health and nutrition experts, along with specialists in algae, clay minerals and trace elements. These teams are located in Olmix Group headquarters in Bréhan, Brittany, which houses the company's laboratories, pilot plant and testing facilities. They also cooperate with universities and research organizations all over the world.

#### **Brittany: land of marine research**

With its significant marine science expertise and resources, Brittany is the ideal site for Olmix Group's R&D. This division benefits from the latest scientific advances thanks to one of the world's first research centers specialized in algae (the Roscoff Biological Station, created in 1872), universities, and specialist institutions such as Ifremer (the French Research Institute for Exploitation of the Sea). Brittany is also one of Europe's largest agricultural and agrifood zones, enabling Olmix Group to test the results of its work in real conditions at applied research centers.



ZOOPOLE

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#### OLMIX GROUP'S THREE MAIN RESOURCES

#### **Clay minerals**

Understanding clay minerals and their uses is a science in its own right, involving many varieties, such as sepiolite, kaolinite and montmorillonite...

Thanks to their numerous properties, clay minerals boost some active ingredients from algae and promote the effective use of trace elements.

#### **Trace elements**

As pure minerals, trace elements are essential nutrients to the life of organisms, in very small quantities.

Trace elements are required for the good function of some physiological reactions. In particular, they are needed for building essential functional molecules (e.g. chlorophyll, hemoglobin, etc.), as well as for enzyme activity, as cofactors.

#### Algae

Algae are an exceptionally varied source of nutrients, and particularly rich in different biologically active compounds.

More precisely, algal sulfated polysaccharides including fucoidan from brown algae, carrageenan from red algae and ulvan from green algae have multiple potential applications as health ingredients.

#### OLMIX GROUP'S TECHNOLOGIES





#### **COMPLETE CONTROL** OF A UNIQUE INDUSTRIAL PROCESS

To give the best value to its innovations and to preserve the intrinsic properties of clays, trace-elements and algae extracts, Olmix Group developed and implemented proprietary industrial processes.

#### The 4 main steps

of the industrial processes

- 1 > Selection of the raw materials
- 2 > Extraction, complexation and grinding
- 3 > Formulation
- 4 > Granulation

All along the industrial processes, Olmix Group follows a HACCP procedure (Algae processed within 48h, cold chain management...).



#### Algae Unique Biorefinery process

Olmix Group has developed some tools and original technologies to control the process of algae transformation from collection to final products.





..... Environmental hygiene Mistral<sup>®</sup> - Mistral<sup>®</sup> Layer

- Z'fix<sup>®</sup> - BlueWater<sup>®</sup>

Mycotoxin risk
 MT.X+® - MMi.S®
 - MT.X AA® - MT.X®

Digestive efficiency

MFeed+® - MFeed® - DigestSea® - stimul'Z® - Z'lick®

Searup<sup>®</sup> - Algimun<sup>®</sup> - MinerAlg<sup>®</sup>

····· Digestive welfare SeaLyt® - SeaGut® Paste -SeaGut® Powder - SeaBiota™ - Diet™



#### ENVIRONMENTAL HYGIENE

mistral®

#### IMPROVING HYGIENE AND WELFARE IN THE PRESENCE OF THE ANIMALS

#### Why?

Moisture in the environment is a fertile ground for the development of pathogens and predisposes animals to health problems. This is also the main factor responsible for the production of ammonia at the origin of most respiratory diseases.

Moreover, it has been scientifically proven that a poor hygiene and an overly damp environment directly impact the welfare and the performance of the animals.

#### Mistral<sup>®</sup> sanitizes the environment through its high drying capacity

Mistral<sup>®</sup> is composed of natural ingredients such as selected essential oils and dried micronized clays. It is obtained through a proprietary drying and grinding process, part of Olmix Group know-how, which improves clay naturally layered structure. Mistral<sup>®</sup> is used for drying boxes and litters, as well as for direct contact with animals allowing farmers to sanitize the animals' environment while respecting their physiological balance and well-being, simply and efficiently.

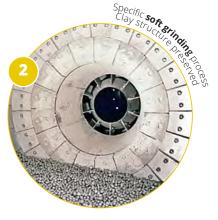
#### **Strengths**

• High drying capacities

FOR FARM

- Skin protection
- Stress reduction







#### ENVIRONMENTAL HYGIENE



#### DAIRY

Use as a desiccating bedding conditionner in order to prevent the development of bacteria which can be responsible for **mastitis** and **ammonia emissions**. Use in dry footbath as a preventive tool to manage the risk of **digital dermatitis** occurrence.



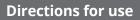


Use as a desiccating conditioner on piglets at farrowing and in the environment for all farm units (post-weaning, fattening, gestation) in order to prevent the development of bacteria which can be responsible for **digestive troubles** and to **reduce the stress**.



#### POULTRY

Use as a desiccating litter conditioner to prevent the development of bacteria which can be responsible for **pododermatitis** and to limit **ammonia emissions**.



#### In dairy:

Cubicle: 50 g every 2 days Calves' pen: 100 g/m<sup>2</sup> every 2 days Dry footbath: apply for 2 days, every 2 weeks

#### In swine:

Nursery: 65 g/piglet at birth - 65 g/litter/day the  $1^{st}$  week of life Post-weaning: 65 g/m<sup>2</sup>/application for 3 days from the weaning Sows: 65 g/m<sup>2</sup>/application (quarantine, farrowing unit, AI, gestation)

#### In poultry:

Litter preparation: 100 g/m<sup>2</sup> In the presence of the animals: 250 g/m<sup>2</sup>/application along the drinkers and wet areas







# mistral<sup>®</sup> Layer

#### THE NATURAL ENVIRONMENTAL **HYGIENE SOLUTION** FOR LAYING HENS

#### Strengths

- Optimized egg-laying performance
- Fewer substandard eggs
- Can be used in the presence of the animals

#### Why?

#### Humidity, pathogens and parasites.

Hens naturally express dust bath behavior, which limits humidity and lipids in their plumage and reduces the spread of bacteria and parasites that can gather there.

#### A dry, healthy plumage.

A humid environment has a negative impact on the hen's plumage, the development of bacteria and also the spread of parasites. A dry environment is therefore essential for maintaining good hygiene and good quality plumage.

#### Mistral<sup>®</sup> Layer improves hygiene by controlling humidity

Mistral<sup>®</sup> Layer improves hygiene by drying the hen's environment, which improves the laying hen's welfare and performance.





Gas powered with pre-set nozzles. (3 to 6 nozzles).

Electric powered, manual applicator



25 kg bag 1 000 kg pallet (40 bags)

#### ENVIRONMENTAL HYGIENE



FOR

FARM

# Z'fix<sup>®</sup>

#### FARM EFFLUENT ENHANCER

FOR BETTER ATMOSPHERE IN BUILDINGS AND A BETTER AGRONOMIC VALUE OF EFFLUENTS

#### Why?

Slurry and manure are living environments that continuously ferment. If they are not well controlled, these fermentations can have negative consequences for both **animals** (gas emission, litter instability and microbial contamination); **farmers** (working time due to crust formation or more frequent cleaning) and **agricultural soils** (reduction of soil fertility and fertilization).

#### Controlling fermentation in organic matter

Z'fix<sup>®</sup>, thanks to its **ECO complex** based on a combination of minerals and specific trace elements, controls fermentation in organic matter. Hence, ammonia emissions are reduced and fertilizing elements are better preserved.

Advantages: **savings in fertilizer while ensuring yield performance**, and also less straw used, better atmosphere in the buildings, homogenization of slurry...

#### **Directions for use**

#### **3 kg/m<sup>3</sup> of manure, slurry or compost** Z'fix<sup>®</sup> can be applied in the presence of the animals. It can be

applied to deep straw bedding (accumulation period > 3 weeks), on slatted floors or directly in slurry pits.

#### Strengths

ECO

- Improved building atmosphere and animal welfare
- Easier work and comfort for farmers
   Enhanced agronomic quality of farm
- effluents (NPK and C/N ratio)
   Better agricultural value when spread







## BlueWater<sup>®</sup> Strengths • Overall imprand biologic

#### **MINERAL COMPLEX**

TO IMPROVE THE ORGANIC MATTER MINERALIZATION BY MICROORGANISMS

#### Why?

Healthy microbial communities are at the heart of water bodies resilience and quality. Excessive organic input or stressing weather conditions can break this equilibrium, leading to a decrease of water quality and an increase of biological hazard.

#### BlueWater<sup>®</sup> is a biological activator designed to support microbial communities responsible for the organic matter mineralization.

The mineral compounds from the active ingredient MIP®water play a major role on microorganism population health.

By improving microflora's health, BleuWater® restores the physicochemical water quality and limits the spread of pathogens, cyanobacteria and toxic compounds.

- Overall improvement of the chemical and biological status of the water
- Non-harmful to fauna and flora
- Can replace lime treatments





#### 600 kg big bag

25 kg bag 1 250 kg pallet (50 bags)



#### Usable in organic farming in compliance with the EC regulations No 834/2007 and No 889/2008

#### **Directions for use**

Spread evenly over the water surface. From 250 to 600kg/ha in 1 or 2 applications according to the recommendations of your dealer. For an optimum efficacy, we recommend to consult a technician.

MYCOTOXIN RISK



#### THE SOLUTION FOR MYCOTOXIN RISK INCORPORATED IN THE FEED

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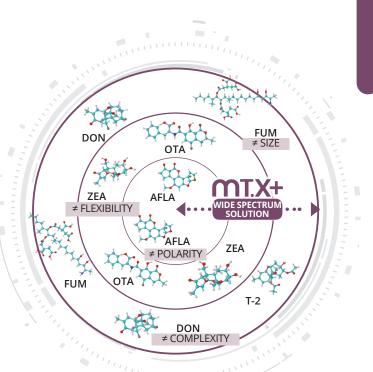
#### Why?

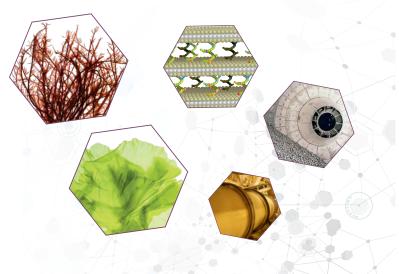
More than 25% of harvested cereals are contaminated with various mycotoxins. The primary physiological effect of mycotoxins is the depression of the immune system caused by polycontamination, leading to lower performance. All animal species are sensitive to mycotoxins, even at low levels.

The key to combat mycotoxins in feed is using a wide spectrum adsorbent as the mycotoxin contamination profile changes constantly. A good binder must also be efficient against mycotoxins like deoxynivalenol and fumonisins, which are difficult to bind because of their size and shape.

#### Reduce mycotoxin risk

 $MT.X+^{\ensuremath{\oplus}\ensuremath{\otimes}\ensure$ 







#### MYCOTOXIN RISK



### **MTX+**<sup>®</sup>

#### MT.X+<sup>®</sup> reduces mycotoxin risk

 $MT.X+^{\circ}$  is incorporated in the diet directly at the feed mill.

#### **Strengths**

- Incorporated in the feed
- Significantly reduces mycotoxin risk
- Specific association offering a broad spectrum of adsorption



# **MMIS**<sup>®</sup>

#### MMi.S<sup>®</sup> directly in the diet

MMi.S<sup>®</sup> presentation has been specifically designed for easy use on farm. It allows a better distribution of the product in the final feed (more particularly: TMR, layer feed...) and limits dust emission.



#### **Strengths**

- Unique formulation for on-farm use
- Significantly reduces mycotoxin risk
   Specific association offering a broad spectrum of adsorption

#### **Directions for use**

Animal Care Technical Teams will help you to optimize MT.X+ $^{\circledast}$  and MMi.S $^{\circledast}$  usage rate depending on the observed level of contamination.

ALSO IN THE RANGE







#### 25 kg bag 1 000 kg pallet (40 bags)



Certified by Bureau Veritas – FR BIO 10 Usable in organic farming in compliance with the EC regulations No 834/2007 and No 889/2008

#### MYCOTOXIN RISK



#### OLMIX EXPERTISE TOOLS FOR MYCOTOXIN RISK MANAGEMENT



#### Olmix • Myco'Evaluator Evaluate Mycotoxin Risk

The Myco'Evaluator is an interactive tool to evaluate the mycotoxin risk on the farm.

Calculate a percentage of risk to have a significant level of mycotoxins in the feed.



#### Olmix • Myco'Screen Expertise on Mycotoxin Analysis

Olmix Animal Care provides customized advices on mycotoxin analysis in order to better handle the risk in feed mills and farms.

An overview of over 40 mycotoxins and metabolites. Olmix experts give you the keys to interpret the analysis and turn it into practical actions.





#### Olmix • Myco'Calculator Optimize usage rate

Olmix Animal Care helps you to determine the most suitable feeding rate of MT.X+<sup>®</sup>/MMi.S<sup>®</sup>.

# MYCO'

#### Olmix • Myco'Essentials Olmix kwowledge

The Guide to Mycotoxins, The Essentials, helps you to better understand each mycotoxin specificity.





#### Olmix • Myco'Simulator To visualize mycotoxins

The application is a unique tool that allows to understand the physicochemical characteristics of the main mycotoxins, to represent the possible interactions with the main products on the market and thus to simulate the adsorption possibilities.



#### Olmix • Myco'News Newsletter

Olmix provides you the latest scientific findings about mycotoxins.





#### **BOOSTER OF ENZYMATIC ACTIVITY** IMPROVED USE OF INGESTED NUTRIENTS

#### Strengths

Improves digestive performance

FOR FFFD

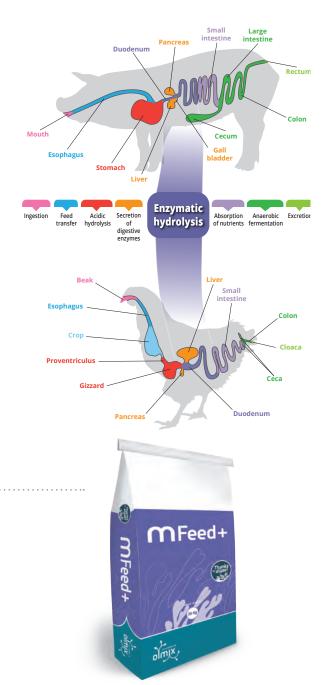
- Boosts enzyme activity
- Enables the use of by-products

#### Why?

Enzymes degrade and transform feed components into nutrients available for absorption in the intestine. Enzymatic activity depends on the contact established between enzymes and their substrate, meaning feed components. Enzymes may also require cofactors, such as metallic ions, in order to be activated.

#### MFeed+® favors enzymatic activity

Based on an association of clay and algae extracts, MFeed+<sup>®</sup> constitutes an optimal support of reaction of digestive enzymes, by favoring the contact between digestive enzymes and dietary components. *Ulva sp.* and *Soliera chordalis* extracts present in MFeed+<sup>®</sup> also bring a diverse source of metallic ions (iron, zinc, copper... and even silver...). These ions act as cofactors and reinforce enzyme efficiency.



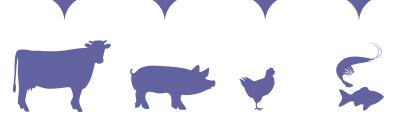
25 kg bag 1 000 kg pallet (40 bags)

#### **Directions for use**

In pigs, poultry and aquaculture: Incorporate in the diet from 0.5 to 2 kg/ton of feed according to feed formulation profile and performance on the farm.











# DigestSea

#### THE SOLUTION TO IMPROVE **DIGESTIVE FUNCTION**

#### Why?

Liver dysfunctions (steatosis, liver congestion, other hepatic diseases) or renal dysfunction decrease performance and shorten animals' lifespan. DigestSea® is recommended in case of indigestion and lowered appetite. It prevents heat stress and oxidative stress.

#### **DigestSea® optimizes digestion**

Specific sulfated polysaccharides from algae (MSP®<sub>LIPIDS</sub>) improve lipid metabolism. DigestSea® formulation increases enzymatic and salivary secretions, protects the liver and generally stimulates drainage (diuretic activity).

#### **Strengths**

- Digestive stimulation Improves digestive and renal
- functions Protects the liver
- **DigestSea<sup>®</sup>-G**ranular



Box of 10 kg



Cans of 1 and 5 liters

#### **Directions for use**

For pigs, poultry and ruminants: Use for 3 to 5 days according to stage and age:

- DigestSea<sup>®</sup> Still: • Young and growing animals: 0.3 to 0.5 mL / liter / day or for 10 kg of live weight / day
  - Breeding animals: 0.5 to 1 mL / liter / day or for 10 kg of live weight / day
  - Laying hens: 0.3 mL / liter / day
- DigestSea<sup>®</sup>-Granular:
  - Young and growing animals:
  - 0.3 to 0.5 g / 10 kg of live weight / day • Breeding animals:
  - 0.5 to 1 g / 10 kg of live weight / day

Aquaculture Consult your veterinarian.



stimul'Z®

#### MINERAL FEED RANGE, DIGESTIVE STIMULATOR FOR RUMINANTS

The range **stimul'Z®**, composed of the 4 references **SAPHIR**, **TOPAZ**, **TARIX** and **RUBIS**, presented as pearled pellets or pellets, allows to stimulate ruminant digestion to maximize the efficiency of the diet, while durably consolidating the animals' general status and production performance.

#### Why?

All over the world, farmers have the same goal: improving feed efficiency in order to enhance the animals' general health status and the performance of their herd, with the aim of improving the economic profitability of the farm. To achieve this, they provide the animals with balanced rations adapted to their physiological stage.

#### Optimizing the rumen and intestinal microflora

Feed efficiency depends on the digestion efficiency, itself conditioned by the digestive microflora effectiveness. The products from stimul'Z<sup>®</sup> range containing DMB complex (Digestive Microflora Booster) have been developed for ruminants in the aim of improving the digestion of the ration. stimul'Z<sup>®</sup> optimizes the activity of the ruminal digestive ecosystem (bacteria, fungi, protozoa) and intestine (enzymes): hence, the feed efficiency is enhanced and the performance optimized.

#### **Directions for use**

• stimul'Z<sup>®</sup> SAPHIR / stimul'Z RUBIS: 2 % of the DMI<sup>\*</sup> • stimul'Z<sup>®</sup> TOPAZ / stimul'Z TARIX : 1.6 % of the DMI<sup>\*</sup> \* Dry Matter Intake

• stimul'Z<sup>®</sup> SAPHIR / RUBIS / TOPAZ: pearled pellets • stimul'Z<sup>®</sup> RUBIS: practical pellets



#### Strengths

- Improving feed efficiency (DMB technology), animals' general health status and herd performance
- Adapted range according to the species, stage and challenges on the farms





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MART M



FOR FARM

# Z'lick<sup>®</sup>

#### A COMPLETE RANGE OF BUCKETS, BASINS AND LICK BLOCKS

In self-service, the buckets, basins and lick blocks from the innovative  ${\bf Z'lick}^{\circledast}$  range stimulate ruminant's digestion.

#### Why?

According to the species and stage of production, animals naturally have different needs. For example, in the dry period, dairy cows will not have the same specific needs as a suckler cow during the grass season. These differences are also valid for an ewe, a goat or a horse that have very different requirements for minerals and trace elements (e.g. copper). A segmented offer adapted to specific needs is therefore essential to optimize the feed efficiency.

#### **Enhanced feed efficiency**

Thanks to its selected marine algae, its enzyme booster (DMB: Digestive Microflora Booster), the use of minerals in optimized form (Se, Zn, Mn) and the addition of different plant active ingredients, Olmix Group stands out to offer a complete original range to performance demanding farmers. The formulas are adapted to the grazing period, the dry period, the growth and production phases, and to ensure animal welfare.

Advantages: improved feed efficiency, enhanced animals' general health status and performance at each stage and/or challenge encountered in the field.

#### **Directions for use**

In self-service - refer to each product leaflet.

#### **Strengths**

- Enhanced digestive efficiency, animals' general health status and herd's performance
- Use of unique OLMIX Group active principles and technologies (algae, trace elements processed with marine algae, DMB)
- A complete range adapted to the requirements of different species, stages and challenges encountered in the field







20 kg bucket - Pallet of 45 buckets (900 kg) 12 kg block - Pallet of 120 blocks (1 440 kg) 10 kg basin - Pallet of 50 basins (500 kg)





#### IMMUNITY



#### REINFORCES NATURAL DEFENSES AND CORRECTS THE POSSIBLE IMBALANCES

#### Why?

The immune system is constantly facing aggressions from the environment (vaccination programs, stress, mycotoxins...). Moreover young animals often encounter a lack of immunity. In these conditions, animals become more sensitive to microbial infections, thus reinforcing the need for an efficient immune system.

#### Searup<sup>®</sup> supports immunity

Searup<sup>®</sup> combines the action of immune-modulating sulfated polysaccharides from marine algae (MSP<sup>®</sup><sub>IMMUNITY</sub>), vitamins and amino acids. MSP<sup>®</sup><sub>IMMUNITY</sub> contributes to a better immune response thanks to the activation of specific receptors of the immune system. It is combined with vitamin and amino acid complexes.

Searup<sup>®</sup> is recommended during stressing periods and in support of vaccination programs.

#### Directions for use

- Searup<sup>®</sup> Granular :
  - 0.5 to 1 g / 10 kg of live weight / day according to the physiological stage
  - Use for 3 to 5 days
- Searup<sup>®</sup> Spark :
  - 1 to 2 sparks according to quantity of water used and physiological stage
  - Use for 3 to 5 days
- Searup<sup>®</sup> Still :
  - $\bullet$  0.5 to 1 mL / liter of water / day according to the
  - physiological stage, or for 10 kg of live weight / day
- Use for 3 to 5 days

Aquaculture Consult your veterinarian.

#### Strengths

• Supports vaccination programs

for Vft

- Improves resistance to stress
- Reinforces natural defenses





Box of 10 kg





Box of 10 sparks of 80 g Box of 24 sparks of 45 g Box of 30 sparks of 16 g



#### IMMUNITY











### **Algimun**<sup>®</sup> STRENGTHENED NATURAL

#### STRENGTHENED NATURAL DEFENSES FOR IMPROVED PERFORMANCE

ALGIMUN<sup>®</sup> boosts gut integrity and the immune function of animals to make them stronger and capable of facing daily challenges.

#### Why?

In modern intensive production systems, animals face several challenges throughout their life cycle. This is even more important during specific sensitive physiological stages (young animals, high demanding production periods, parturition...) or when facing external stressors (environmental factors, pathogen attack, intense vaccination programs...). This is also essential when implementing antibiotic reduction strategies, compulsory today to save antibiotics efficacy on the long term for both animals and humans.

#### Enhancement of gut integrity and immune function

ALGIMUN<sup>®</sup> is based on the association of two biologically active sulfated polysaccharides extracted from marine algae thanks to Olmix innovative technology: MSP<sup>®</sup>BARRIER</sub> improves the integrity of the intestinal wall for higher resistance to pathogenic aggressions, and MSP<sup>®</sup>IMMUNITY modulates the production of several immune mediators to strengthen both innate and adaptive immune responses. ALGIMUN<sup>®</sup> application in the feed (all species) ensures better animal performance and higher profitability.

#### **Directions for use**

From 1 to 3 kg/T of feed according to animal species, stage and farm conditions.

#### Strengths

- Synergistic association of two biologically active marine algal extracts
- Strengthening gut integrity and supporting immune function
- 100% proven mode of action
- Optimized animal's performance









#### 25 kg bag 1000kg pallet (40 bags)



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#### IMMUNITY



# minerAlg®

#### MARINE BIOTECHNOLOGY CONCENTRATE FOR RUMINANT MINERALIZATION

The minerAlg<sup>®</sup> range combines the technological and biological benefits of macroalgae to offer mineral feeds that strengthen animals' natural defenses for improved well-being, health and performance. This complete range of 7 references in granular or pellets is adapted to the different species (bovine, sheeps or goats) and breeding phases and benefits from the innovative ALGIMUN<sup>®</sup> and TRACESEA<sup>®</sup> products based on OLMIX Group unique marine biotechnologies MSP<sup>®</sup> and SEAPLEX<sup>®</sup>.

#### Why?

Today, in all modern production systems, animal's immunity is subjected to permanent aggressions such as heat stress, change of environment, weaning, feed transitions, mycotoxin contaminations, high productivity phases. These challenges can lead to reproductive disorders, high somatic cell counts, reduced milk production, mastitis, and ultimately economic losses for the farmer.

#### Strengthen natural defenses

Immunity needs to be built and then maintained. The minerAlg<sup>®</sup> range is a concentrate of marine biotechnologies combining macroalgae extracts able to reinforce the natural defenses of the animals and their resistance to stress, with high quality nutritional supplements. They are acting in synergy to improve animal's performance and farm profitability.

#### **Directions for use**

- minerAlg  $\ensuremath{^{\ensuremath{\mathbb B}}}$  Dairy Cow HP: 250 g (200 to 300 g) / day
- minerAlg® Dairy Cow HP-Pellet: 250 g (200 to 300 g) / day
- minerAlg<sup>®</sup> Dry Cow: 170 g (150 to 190 g) / day
- minerAlg  $^{\mbox{\tiny (B)}}$  Beef Cow: 200 g (150 to 250 g) / day

#### Strengths

- Strengthens natural defenses, body condition and herd performance
- Ensures complete nutritional supply
   Adapted range according to the stage and challenges of the farm





600 kg Big Bag (\* Dry Cow only in 25 kg bags) 25 kg Bag 1250 kg Pallet (50 bags)

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# SeaLyt<sup>®</sup> Spark

#### DECREASING DIGESTIVE PROBLEMS AND REHYDRATING

THROUGH THE DRINKING WATER

#### Why?

Digestive problems are the first cause of mortality in young animals. They are known to cause important economic losses in pigs and poultry farms because of late growth. Digestive problems are caused by the degradation of the intestinal mucosa integrity. They also trigger animals' dehydration, loss in electrolytes, mineral leakage and poor assimilation of nutrients, resulting in a lack of energy.

#### SeaLyt® stimulates water consumption

Rich in algae-extracted sulfated polysaccharides able to stimulate mucin secretion (MSP®<sub>MUCIN</sub>), SeaLyt® reinforces the mucus thickness which protects the intestinal epithelium. Well protected, the mucosa has a better barrier efficiency and regulates nutrient uptake. Moreover, SeaLyt® is a source of easily assimilated energy. SeaLyt® allows regulation of the intestinal transit and favors animals' rehydration.

#### Strengths

- Reduction of digestive troubles
- Rehydration
- Stimulation of water intake







Box of 24 sparks of 45 g Box of 30 sparks of 16 g

#### **Directions for use**

For young and growing animals or breeders:

- 1 to 2 sparks according to the quantity of water used
- Use for 1 to 3 days according to animals' condition.







### SeaGut<sup>®</sup> Paste

#### THE NATURAL SOLUTION

TO ENSURE DIGESTIVE WELFARE OF NEWBORN PIGLETS

#### The challenge

#### Neonatal digestive troubles and piglet's dehydration

Neonatal digestive troubles often represent the principal cause of piglet's mortality and generate important economic losses. They are frequently associated with animal's dehydration, leading to electrolyte and mineral losses and poor nutrient assimilation generating energy deficiencies. The affected animals are generally lethargic and are characterized by pronounced emaciation of the spine, ribs, and pelvis. Litter homogeneity is impacted and late growth at weaning is frequently observed.

#### **The Solution**

#### SeaGut<sup>®</sup> Paste, an original combination of 3 synergetic actions to optimize intestinal welfare

**Protect** the digestive tract: the supply of MSP®<sub>MUCIN</sub> (sulfated polysaccharides), originating from marine algae, boosts the production of mucin and increases the mucus layer in the intestinal tract. Micronized clays cover the intestinal epithelium, providing a mechanical protection. The mucosa is better protected with improved barrier function.

**Favor** a balanced intestinal flora with selected essential oils and yeast extracts.

**Stabilize** physiological balance: SeaGut<sup>®</sup> Paste contains rapidly available energy sources (spirulina and dextrose) and electrolytes.

These properties allow to regulate the transit and increase the rehydration of the piglets.

#### Strengths

- 3 synergetic actions in one product
- Reduce digestive problems
- Decreased need for medication



#### Airless tube of 100 ml (50 doses of 2 ml) 120 ml cartridge (60 doses of 2 ml) to be used with a dosing gun

#### **Directions for use**

#### Supplied orally

Use in case of identified digestive problems, or with neonatal health care in farms with recurrent digestive problems at birth: 1 dose of 2 ml (1 push)/piglet /day. Administer to the entire litter.

For an optimum efficacy, we recommend you to consult your veterinarian for an adjusted dosage recommendation.







#### SeaGut<sup>®</sup> Powder<sup>®</sup> Increase of weaning weight • Increase of weaning weight • Decrease the occurrence of digestive problems

#### THE NATURAL SOLUTION TO ENSURE DIGESTIVE WELFARE OF SUCKLING PIGLETS

#### Why?

Digestive problems are frequent soon after birth and during feed transition periods, particularly at weaning. They can trigger important dehydration and favor the development of pathogens in the intestine, rapidly compromising the gut wall integrity. Moreover, intestinal villi development is significantly impacted, thus reducing the absorption of nutrients and the feed valorization.

#### SeaGut<sup>®</sup> Powder prepares piglets to weaning challenges.

The algae extract used in SeaGut® Powder was selected for its content in specific sulfated polysaccharides (MSP®<sub>MUCIN</sub>) capable of stimulating the secretion of mucin in the intestine. Mucins (part of intestinal mucus) have a protective effect on the intestinal wall. Micronized clays further help to protect the gut wall thanks to a mechanical effect, and clinoptilolite traps ammonia ions which slow down the development of intestinal villi.



digestive problemsHelp for demedication



#### **Directions for use**

SeaGut® Powder is recommended from the  $5^{th}$  day of life until weaning, placed directly on the floor between piglet's resting area and the sow.

Usage rate: 1 scoop (or 50 g) per litter per day (12 piglets). May also be distributed in liquid form after addition of water.







# **SeaBiota**<sup>™</sup>

#### **THE NATURAL SOLUTION** TO ENSURE DIGESTIVE WELFARE OF POST WEANING AND FINISHING PIGS

#### Why?

Weaning is the most stressful moment in piglet's life. Separation from the sow (loss of contact, milk, environment...), environmental change, transport to another room or building, mixing with unfamiliar piglets, the transition from milk to creep feed, are all stress factors that negatively impact animal health. These changes have consequences on the intestinal morphology of the piglet. Digestive troubles can occur and lead to antibiotic overuse.

### SeaBiota<sup>™</sup>, an innovative solution to reduce digestive troubles of pigs from weaning to finishing.

• Protect the digestive tract: supply of marine algae sulfated polysaccharides (MSP®<sub>MUCIN</sub>) boosts the production of mucin and increases the mucus layer of the intestinal tract. A specific potentialized ZnO issued from a unique Olmix process increases ZnO capacity to decrease digestive troubles.

• Favor a balanced gut flora with a specific mix of essential oils.



Strengths

Reduce digestive troubles

Decrease the need of medication
Optimized animal's performance

#### **Directions for use**

For best results, consult your veterinarian for a tailored usage.

To be mixed homogeneously in water and used with a dosing pump. The solution need to be mixed every 6 hours.

#### In farm with regular digestive troubles

At weaning and / or around critical periods for **3 to 5** days:

- 1 ml / liter of drinking water / day
- 1ml / 10kg live weight / day

#### In case of digestive troubles

For **5 days** upon observation of digestive troubles:

- 1 ml / liter of drinking water / day
- 1 ml / 10kg live weight / day



#### Cans of 1 and 5 liters





# Diet<sup>™</sup>

#### NATURAL REGULATOR OF THE DIGESTIVE SYSTEM OF YOUNG RUMINANTS

#### Why?

Diarrhea is a primary cause of mortality in calves and young ruminants. Diarrhea is responsible for late growth, due to poor valorization of nutrients. Consequently, it leads to significant economic losses in ruminant breeding.

#### Natural regulator of the digestive system

Hydrodispersible micronized clay (Olmix Group technology) in Diet<sup>™</sup> acts together with specific algae extracts (MSP®<sub>MUCIN</sub>) to protect the intestinal wall integrity.

Moreover, hydration and electrolyte balance are stabilized thanks to the supply of algal and electrolytic nutrients. Diet<sup>™</sup> eases the digestion process.



#### Strengths

- Decreases diarrhea effects in young ruminants
- Supports physiological digestion
- Easy oral administration



### **Diet**<sup>™</sup> Paste

#### **Directions for use**

#### For young ruminants:

- 1 dose of 30 mL / meal / 50 kg of live weight
- Recommended use: 1 to 7 days (1 to 2 days if fed exclusively)



### **Diet**<sup>™</sup> Powder

#### Directions for use

#### For young ruminants:

- 40 g / meal / 50 kg of live weight
- Recommended use: 1 to 7 days (1 to 2 days if fed exclusively)





Packet of 40 g

g Bucket of 2.5 kg



ZA du Haut du Bois 56580 Bréhan - FRANCE Phone: +33(0)2 97 38 81 03 Fax: +33 (0)2 97 38 86 58 contact@olmix.com www.olmix.com

