



Sustainability Report 2016

nutreco

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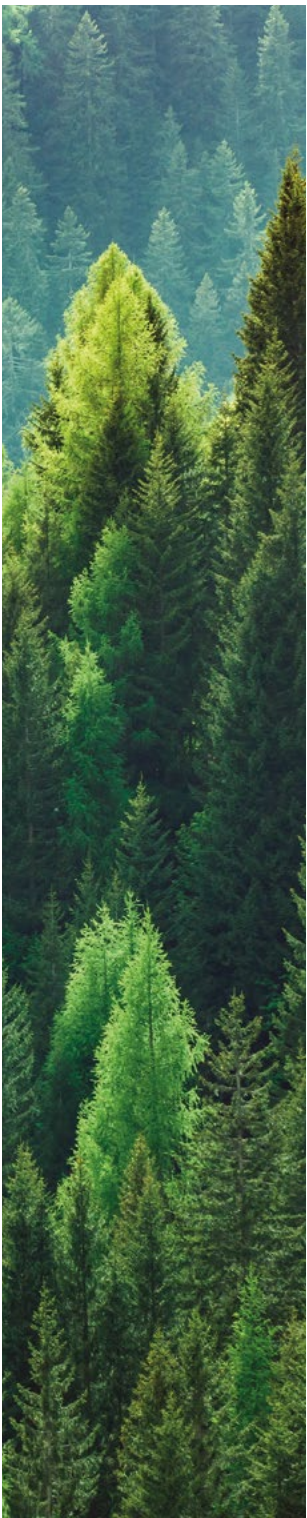
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Letter from the CEO

As a global company with considerable technical expertise at our disposal and an overriding focus to deliver the highest quality and safety standards, Nutreco is perfectly positioned to progress sustainability in the feed-to-food chain and every day we strive to fulfil this responsibility.

Nuterra is our new global sustainability programme, providing the vision and actions needed to ensure that we live up to our obligations and ambitions. It is also aligned and contributes to eight of the United Nations' Sustainable Development Goals, which define global sustainability priorities and seek to mobilise efforts around a common set of objectives and targets.

This approach also reflects our own mission of Feeding the Future, and our current focus areas include the essential areas of reducing antibiotic use, producing more food from less resources and bridging the productivity gap that exists between developed and developing countries.

While participating on various platforms designed to encourage debate and alignment on global feed, food, agri- and aqua-business topics, Nutreco has also continued to follow several courses of strategic action that are specifically aimed at addressing some of the feed-to-food chain's most pressing sustainability challenges.

Antimicrobial resistance is recognised as one of the most potent challenges facing public health today, therefore Nutreco endorses that drastic reduction and cautious future use is crucial in the interests of human health as well as for animal health and welfare. In the last 12 months, not only have we helped animal farming operations fulfil their ambition to become antibiotic-free at a local level, we have also established the Pincoy Project – a collaborative effort across global and local players to reduce antibiotic use in the much broader Chilean salmon farming industry.

To continue to progress, including escalating food productivity and keeping pace with the ever-rising global demand, farming on both land and in the water need many more innovative and collaborative programmes of all levels. At Nutreco, we believe that we all have an important part to play – now more than ever.

Knut Nesse
Chief Executive Officer

1. ABOUT THIS REPORT



Our mission

feeding
the future



About this Report

Welcome to the 2016 Nutreco Sustainability Report. This year, we have taken a different approach to reporting by aligning with the United Nations Sustainable Development Goals. These goals were launched at the end of 2015 and implemented in 2016. They define global sustainability priorities and seek to mobilise efforts around a common set of goals and targets. In other words, it is the materiality assessment of global society.

The Sustainable Development Goals call on businesses to apply their creativity to solve problems through the investments they make, the solutions they develop and the practices they adopt. In short, they encourage businesses to seek opportunities for creating shared value for their business as well as society. Such an approach reflects Nutreco's mission of Feeding the Future.

In this report, we will highlight the actions taken by Nutreco during 2016 to create shared value in relation to the Sustainable Development Goals and our mission, in addition to outlining our plans for 2017.



**SUSTAINABLE
DEVELOPMENT
GOALS**

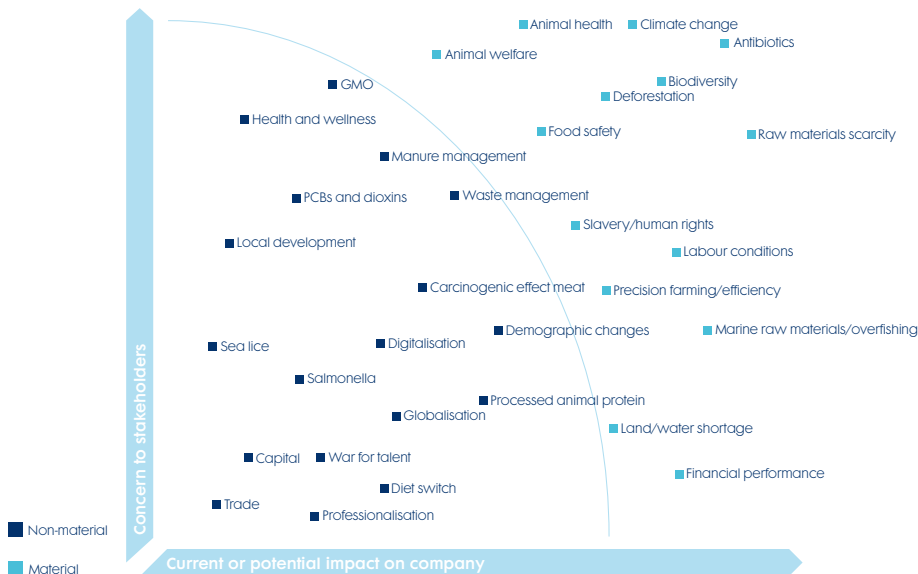
Materiality

This report is written in accordance with the Global Reporting Initiative fourth generation (G4) guidelines for core reporting. As such, the content is guided by the findings of our materiality assessment. In 2015, we engaged with internal and external stakeholders to undertake a thorough evaluation of our original materiality assessment from 2009. Details of this can be found on page 8 of the 2015 report.

This year, we undertook a less intensive review to ensure our strategy continues to address the issues that are important to our stakeholders. This was done during a two-day workshop attended by all six members of the Nutreco Sustainability Platform with the aim to align our strategy and actions with the Sustainable Development Goals.

The Nuterra Self-Assessment tool together with the materiality index from 2015 were used as the basis of this process since the issues identified in these are the foundation of Nutreco’s sustainability strategy.

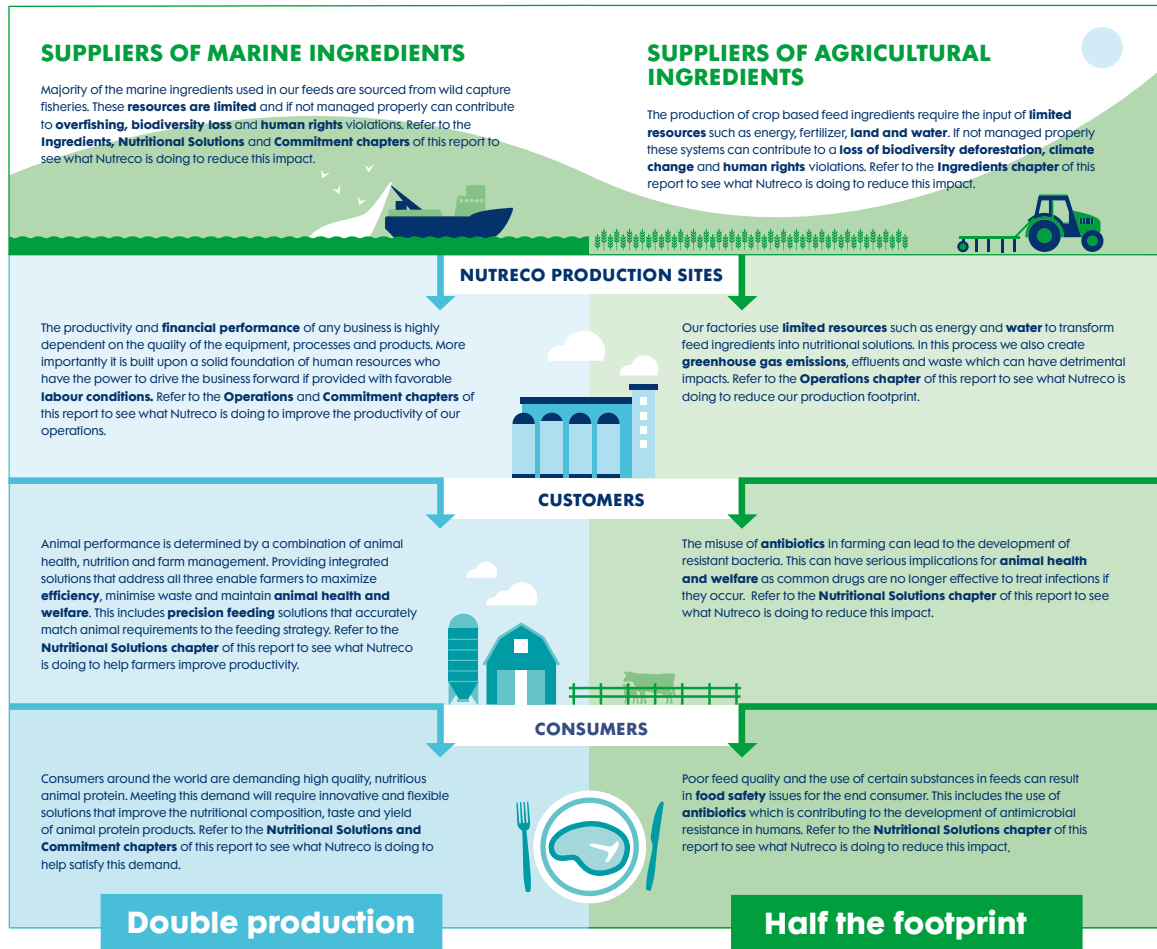
Two changes were made to the materiality matrix to reflect the findings of the review process. Soy and palm are no longer mentioned as separate topics since many of the issues associated with the production of these commodities were covered by other indicators such as human rights, climate change and land/water shortage. The only exception was biodiversity and deforestation, which were subsequently added to the matrix. The second was the addition of labour conditions since many of our initiatives focus on issues such as remuneration, training and safety that are not captured by human rights/slavery.



Linking Materiality to Strategy

The following diagram provides a brief explanation of the material issues throughout our supply chain and directs you to where in the report you can find an explanation of what we are doing to address these

issues. It also identifies how this relates to our mission of Feeding the Future by doubling production whilst halving the footprint.



Aligning the Nutreco Sustainability Strategy with the United Nations Sustainable Development Goals

In late 2015, the United Nations issued a call to action for businesses around the world to work together to achieve 17 Sustainable Development Goals¹. Nutreco has responded to this call by joining the United Nations Global Compact as well as aligning our strategy with the goals. As part of the Nuterra Standard review process, we identified eight of the Sustainable Development Goals that were most relevant to Nutreco's business and where we were best positioned to make a positive contribution. We then aligned our Nuterra Roadmap and sustainability objectives with these eight goals as described in the section below. Further details of how we add value to these goals can be found at the beginning of each chapter in this report.

For each of the selected Sustainable Development Goals we have identified an action from the Food and Beverage Industry Matrix² and translated these into specific Nutreco objectives. Each of these objectives also aligns with Goal 2 - Zero Hunger which calls for industry to collaborate with other players in the value chain to increase productivity and market efficiency. They also align with Goal 17 which encourages businesses to engage in multi-stakeholder initiatives advancing sustainable development. The timeframe for each of these goals varies to reflect the more long term nature of many of these initiatives, with progress against these to be reported annually in our Sustainability Report.



Nutreco's Approach to Delivering on the Sustainable Development Goals

Goal	Actions Identified in Industry Matrix	Nutreco Objective
Goal 3	Take collective action to eliminate antibiotics for routine use in food production	<p>By 2018 we will contribute to a 50% reduction in antibiotic use in Chile through our involvement in the Pincoy Project. Refer to the Commitment chapter of this report for further details.</p> <p>By 2018 we will have a portfolio of examples from farmers that have reduced their reliance on antibiotics through the implementation of our Healthy Growth Initiative</p>
Goal 8	Develop the capacity of small scale entrepreneurs to participate in supply chains	By 2020 we will have an additional eight community development projects (total of 10) set up in emerging markets that transfer knowledge and best practice to subsistence farmers
Goal 12	Develop and apply common standards and methodologies for sustainability across the lifecycle of a product	By 2020 we will have Nuterra Product Assessments for at least four of our new global products ³ (total of six)
Goal 13	Take steps to measure, reduce and report climate exposure and progress on actions to confront climate change	<p>By 2018 we will launch a Nutreco wide efficiency program to encourage OpCos to reduce energy and water consumption</p> <p>In 2017 and beyond, we will continue to monitor, record and encourage operational action to reduce the impact in our five KPI monitoring program across all of Nutreco companies in scope⁴</p>
Goal 14	Develop innovative solutions to preserve marine resources and share expertise with governments and other stakeholders to better mitigate and manage risks arising from fishing and aquaculture	<p>By 2017 we will implement a multi-stakeholder fishery improvement project in Peru together with our industry and government partners</p> <p>By 2020 we will successfully complete the fishery improvement project in Peru</p>
Goal 15	Strive to eliminate agriculture driven deforestation and implement sustainable land-use commitments	By 2020 we will contribute to the development of an industry based solution to reduce deforestation associated with the primary production of crops

Assurance

Since 2009 we have engaged KPMG to audit and issue assurance to our report. We believe the extra cost and effort from external, independent assurance verification offers more accountability to our stakeholders. It embellishes our report with additional credibility and helps demonstrate our commitment to hold ourselves accountable. KPMG provides reasonable assurance (which is the highest level of assurance possible) on all information in this report except for the information on energy, greenhouse gas emissions, water, waste, safety

and tonnes produced. On these figures, limited assurance is provided. The Assurance Report from our external assurance provider can be found at the end of this report. The next section of this report is structured in a way that allows us to report on progress against the four Nuterra Pillars and at the same time align with the United Nations Sustainable Development Goals that are directly addressed by our activity. To support a better understanding of our activities we have described actual case studies from our businesses. ■



A landscape photograph of a field with a large orange overlay. The foreground shows green grass, and the background features rolling hills under a blue sky with white clouds. A large, semi-transparent orange rectangle covers the majority of the image, with the text '2. STRATEGY' in white positioned in the upper right corner of this rectangle.

2. STRATEGY



Doubling production

Halving the footprint

nuterra™

**Nuterra
Roadmap
2020**

Strategy

Our Mission: Feeding the Future

The ambition of Nutreco is to contribute to meeting the growing demand for food in a sustainable manner. We aim to be the global leader in providing innovative and sustainable nutritional solutions that best support the performance of animals, fish and shrimp. This is the essence of our mission of Feeding the Future in which we work towards enabling farmers to double production whilst halving the environmental impact of the feed-to-food value chain. To help us put these ambitions into action we have developed the Nuterra Programme.

Nuterra Programme

In 2016, we launched Nuterra, Nutreco's new global sustainability programme. This provides the vision and actions needed to ensure we will live up to our responsibilities and ambitions. The programme is made up of three parts: Nuterra Roadmap, Nuterra Standard and Nuterra Product Assessment.

Nuterra Roadmap

Our Nuterra Roadmap is an aspirational roadmap designed to align our actions and initiatives over a period of several years, as we work to fulfil our mission of Feeding the Future. This roadmap replaces the Vision 2020 which was Nutreco's sustainability strategy developed in 2012. The objectives identified in the roadmap are grouped into four areas: Nutritional Solutions, Ingredients, Operations and Commitment.

As is often the case with sustainability policy, they are often filled with lofty, aspirational-type language that is hard to define or measure. As the saying goes; "if it can't be measured, it can't be managed"; and at Nutreco we believe this. To ensure Nutreco does not fall into that comfortable trap we developed the second component of the Nuterra Programme which we call the Nuterra Standard.

Nuterra Standard

Our Nuterra Standard is an internal tool which clearly outlines the actions needed to realise the Nuterra Roadmap and enables us to measure and score progress against these over time. Our Operating Companies (OpCos) undertake this self-assessment biannually to ensure that we hold ourselves accountable in our sustainability aspirations and targets. We are aware of the limitations of self-assessment and have taken steps to make the multiple-choice responses as measurable and specific as possible in our effort to support accuracy in our scoring progress.

This tool was first used in 2015 to assess the OpCos from Nutreco Business Units (BU) Europe, Middle East and Africa (EMEA), Global Salmon and Fish Feed (GSFF) Southern Europe and Feed Additives (FA). This year, it was undertaken by those from BUs Asia, Americas and Iberia.

The scores shown in the table below indicate the percentage of the total number of criteria for 2020 that have been met at the time of assessment. In general the Americas and Asia performed slightly below the BUs in scope for 2015 which is indicative of the level of maturity in

Results from 2016 Self Assessments

These results show the average percentage of Nuterra criteria that were met by the OpCos from each BU

	Ingredients	Operations	Nutritional Solutions	Commitment
BU Americas	71%	57%	65%	46%
BU Asia	53%	61%	68%	52%
Nutreco Iberia	38%	64%	50%	38%

¹SADA and INGA were not included in the assessment because majority of the questions are not relevant to their business (meat production)

Results from 2015 Self Assessments

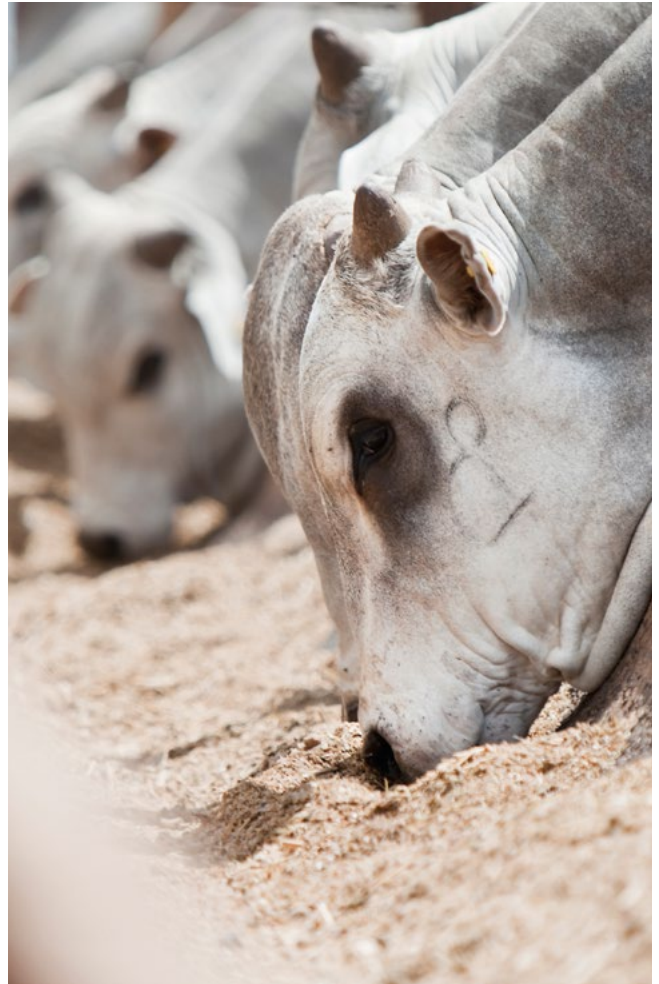
These results show the average percentage of Nuterra criteria that were met by the OpCos from each BU

	Ingredients	Operations	Nutritional Solutions	Commitment
BU EMEA	79%	71%	72%	76%
BU GSFF	77%	78%	85%	82%
BU FA	79%	57%	82%	65%

these markets. In regards to Iberia, this segment has been out of scope for many of the sustainability initiatives over the past few years due to changes in company structure. As such, their scores are lower than the other BUs, however plans are in place to improve this over the coming years.

As can be expected in a diverse global company like Nutreco, executing this task was made challenging by the different organisational structures in place at each of the BUs. For example there was no procurement manager in BU Asia and Americas which made it difficult to gather the data for those compliance criteria pertaining to that particular subject.

The results were summarised in a report and distributed to management to identify the areas which need further work towards fulfilling 100% of our Nuterra Roadmap by the year 2020. The issues identified varied by OpCo and are to be followed up by local management. The self-assessment results serve as a direct guidance to the OpCo management team on where to focus additional efforts in specific area of low scores. From a Nutreco-wide perspective, the results indicate that we need to work closely with other departments to implement sustainability initiatives. For example, with procurement to identify strategic suppliers to collaborate on sustainability projects, with operations to develop a greenhouse gas emissions policy and the quality department to improve the supplier audits.

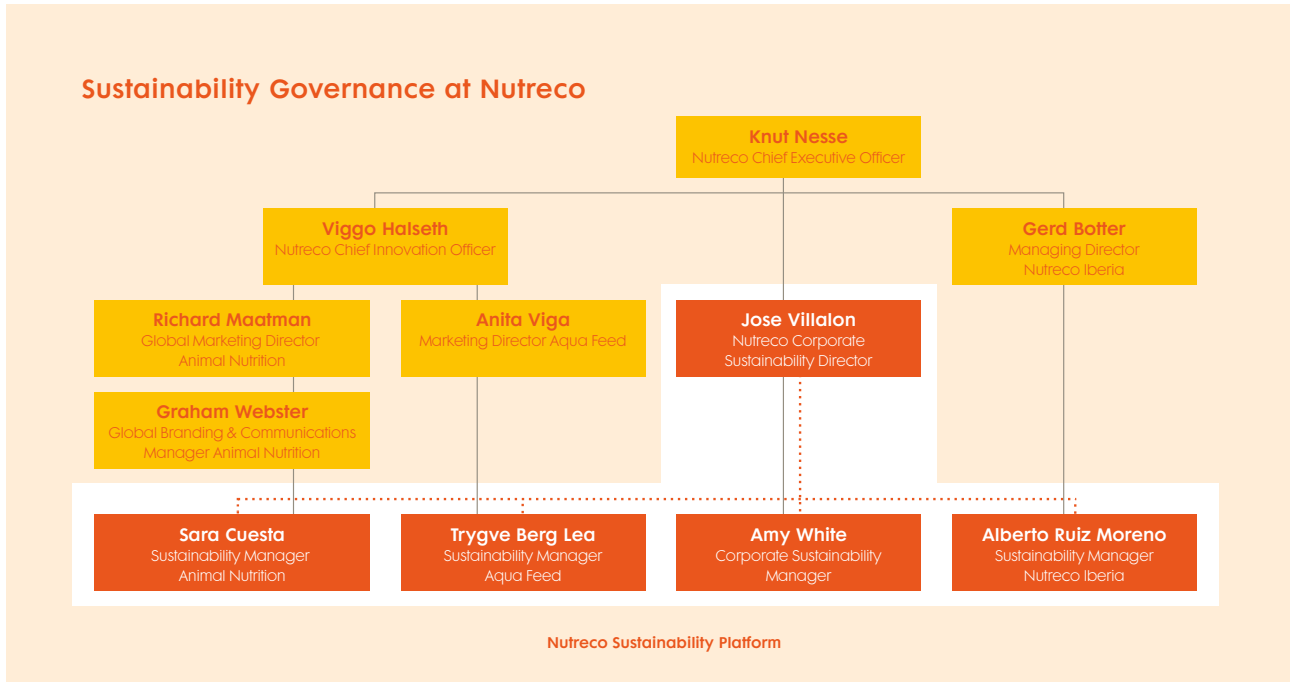




A comprehensive review of the Nuterra Standard was undertaken in 2016 to ensure the criteria are still relevant. The revised version will be used next year when EMEA, GSFF and FA undertake the assessment once again.

Nuterra Product Assessment

The Nuterra Product Assessment helps us to measure the environmental impacts and attributes of our nutritional solutions. It uses Life Cycle Assessment methodology to systematically evaluate the environmental aspects of using our products and services and compares that measured performance with a baseline. This baseline used varies between assessments depending on the rationale behind the assessment. For example, in cases where we are replacing an existing nutritional solution from our portfolio with a new solution, the old product is used as the baseline. In other cases we use an industry average. More detail can be found in the Nutritional Solutions chapter of this report.



Sustainability Governance

Sustainability is the responsibility of Nutreco's CEO, who is directly supported in this role by the Corporate Sustainability Director and the Nutreco Sustainability Platform. The Nutreco Sustainability Platform team is led by the Corporate Sustainability Director, with support from four other members who represent the different divisions of the business. The Nutreco Sustainability

Platform meets monthly and is tasked with designing and executing the sustainability strategy. Working together with other departments, this strategy translates into actions that are implemented throughout the global business. The Corporate Sustainability Director meets twice a year with the Nutreco Supervisory Board to discuss progress and direction. ■

Nutreco Animal Nutrition

Premixes | Compound feed | Farm minerals | Young animal feeds | Preventive animal health products | Feed additives

Market

- Trouw Nutrition is #2 global premix producer
- ShurGain and Landmark are #1 in Canada



Presence

- 14 production facilities in EMEA, 26 in the Americas, 1 in South Africa and 4 in Asia
- Joint ventures in Venezuela and Ukraine



Customers

- Feed compounders, integrators, distributors, farmers, companion animal industry



Suppliers

- Producers of grains, vegetable proteins, land animal products, amino acids, trace elements & minerals, vitamins, dairy products, preventive animal health products and organic acids

Nutreco Aqua Feed

High-quality feeds from hatching to harvest for more than 60 species of farmed fish and shrimp

Market

- Skretting is the leading global salmon feed producer
- Global #3 shrimp feed producer



Presence

- Production facilities in 18 countries and sales in over 40 countries
- Joint ventures in Honduras, Nigeria and Zambia

Customers

- Fish and shrimp farmers

Suppliers

- Producers of marine ingredients, vegetable proteins, vegetable oils among others

Nutreco Iberia

Poultry products, pig farming, trading and feed solutions primarily for poultry, pigs and ruminants in Spain and Portugal

Market

- Nanta is the leading compound feed producer in Iberia
- Sada is the largest poultry producer in Spain
- Inga Food is #2 swine integrator in Spain



Presence

- Nanta has a nation-wide presence in Spain and Portugal with 19 compound feed plants
- Sada has a nation-wide presence in Spain with 8 poultry processing facilities

Customers

- Nanta services livestock farmers including Sada and Inga Food
- Retail, wholesale, food industry and food service (Sada); pig meat processors (Inga Food)

Suppliers

- Nanta sources from producers of grains, vegetable proteins, land animals products, vegetable oils
- Sada and Inga Food source from Nanta and others

3. NUTRITIONAL SOLUTIONS





Nutritional Solutions

Nutreco's unique combination of products, services and models are designed to help farmers boost productivity and support animal health. By doing so we address three of the United Nations Sustainable Development Goals.



Antimicrobial resistance is a serious health concern that is predicted to overtake cancer as the leading cause of death by 2050. The rapid progression of this is believed to be caused by the misuse and overuse of antibiotics in people and animals. It is inevitable that the animal protein value chain reduces the amount of antibiotics used in food production significantly. Nutreco offers nutritional solutions that help farmers to reduce their reliance on antibiotics without impacting growth. This adds value to the farmer in terms of productivity as well as helping to address antimicrobial resistance.



Feeds are a major source of the economic and environmental costs associated with animal production. Nutreco offers a range of Nutritional Solutions which help farmers to reduce these costs by enabling them to produce more from less. This includes Trouw Nutrition's Nutri-Opt precision feeding system⁶ and the Selko TOXO range⁷ which reduces waste caused by mycotoxin contamination. Our Nuterra Product Assessment also adds value by informing our customers of the environmental impacts of their decisions, and encouraging them to use more sustainable options.



As population grows, so too does demand for seafood with per capita consumption doubling from the 1960 until now. Majority of this growth has been supplied by aquaculture which currently represents 50% of global seafood consumption. Ironically this rapid expansion has increased pressure on wild fish resources which have traditionally been a major source of the vital nutrients used in aquafeeds. After years of research at Skretting ARC we are now able to produce fishmeal free diets. This not only creates value for our industry by enabling continued growth, it also benefits society by taking pressure off precious marine resources.

Healthy Growth - Our Contribution to Reduce the Use of Antibiotics in Food Production

Trouw Nutrition is committed to helping farmers reduce their reliance on antibiotics as part of the global fight against antimicrobial resistance. We are aware that farmers are often reluctant to reduce the use of antibiotic growth promoters due to worries about the likely impact on animal performance and profitability. However, we believe it is possible with a combination of feed, farm and health management approaches. This includes ensuring safe feed and drinking water, better gut health, optimal digestion, and keeping harmful pathogens like salmonella off the feed-to-food chain.

Better Performance without Antibiotics

Of Tov Group is Israel's leading producer of quality poultry products. In 2016, it approached Trouw Nutrition with a challenging request: How can we respond to consumer demand to address antimicrobial resistance? The initial idea was to reduce salmonella, but this was not ambitious enough for Of Tov who wanted to go 100% antibiotic-free. Trouw Nutrition worked together with Of Tov to

implement our antibiotic-free products for several cycles in their broiler integration. Unfortunately, the initial results were disappointing with many animals having health problems which negatively impacted farm performance and profitability. Further investigations identified the reason for this outcome was that our products were not being used properly. This improved immediately once Nutreco implemented a full programme of feed, farm and health management.

In the feed management process, a Trouw Nutrition nutritionist analysed the digestibility of the animal protein sources used by Of Tov and revised the feed formulation. During the health management advice, we executed our gut health scoring system, which resulted in additional prevention of necrotic enteritis in the broiler chickens by using Selko Presan-FY. Next to that, we discussed the vaccinations strategy. Thanks to our farm management, water quality and digestibility were improved by applying the appropriate Selko-pH dosage.



This holistic approach resulted in a feed conversion improvement of 1%, demonstrating that productivity is not sacrificed when reducing antibiotics. Of Tov now works entirely without antibiotics, which has resulted in distinct quality improvement, increased turnover and reduced costs.

“It is my mission to prove to our clients that antibiotics are not the only solution when combating micro-organisms, and that feed additives are a viable alternative to reduce the need for antibiotics,” says Maarten van der Heijden, Global Programme Manager of Feed Additives. Despite the positive results obtained from this initiative, it should be noted that it took place in a dry climate. We still face challenges in achieving the same outcomes in a more humid climate where diseases are more difficult to manage, but we continue to work with farmers to find solutions.

The Role of Feed Additives in the Reduction of Antibiotic Growth Promoters

Trouw Nutrition set up a commercial trial in a large broiler integrator in Indonesia to compare the performance of broilers fed feed additives with those fed antibiotic growth promoters. In the 35-day trial, 300,000 broilers received commercial feed with the addition of either a commonly used antibiotic growth promoter or feed additive. The two feed additives used in the trial were Selko-pH which is applied via drinking water and Selko Presan-FY which is administered in the feed.

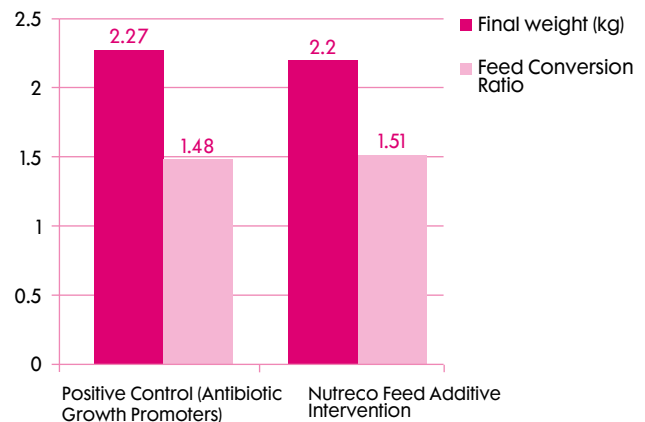
The birds were held in closed houses for the entire 35-day period and monitored for technical performance. Results indicated that the performance of the birds on the combined feed additives was comparable to the ones on antibiotic growth promoters. Furthermore, both groups had a low mortality rate (4.0% and 4.1%), which confirms that similar results can be achieved both with and without the use of antibiotic growth promoters.

The study shows that broiler integrators are able to reach comparable performance in production systems that are free from antibiotic growth promoters when using feed additives. Farmers can potentially benefit from increasing revenues, as high-quality broilers raised without antibiotic growth promoters can be sold to high-end markets.

“It is my mission to prove to our clients that antibiotics are not the only solution when combating micro-organisms, and that feed additives are a viable alternative to reduce the need for antibiotics”

Despite these positive results, we still face significant hurdles in changing traditions and long held beliefs amongst farmers that good results are achievable without the use of antibiotic growth promoters. We will continue to work with farmers to demonstrate the possibilities in an attempt to slowly change this mindset.

Results from Field Trials

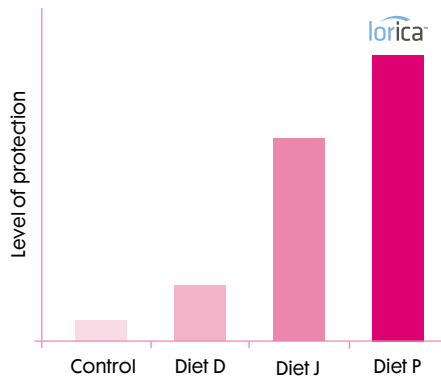


Prevention is Better than Cure

Most shrimp grow-out sites are exposed to the natural environment. This makes it difficult for farmers to protect their stocks from harmful bacteria such as the one known to cause Acute Hepatopancreatic Necrosis Disease which has devastated stocks across many major shrimp producing regions. Through considerable R&D, Skretting has confirmed that the right combination of novel functional ingredients in the shrimp feeds can work in synergy to support the functioning of the immune system and to help protect shrimp against hostile threats.

The latest breakthrough in health diets for shrimp came with the release of Lorica. Lorica diets contain a complex profile of innovative functional ingredients designed to safeguard shrimp during challenging phases in their life cycle. This unique formulation delivers invaluable support to the immune responses of shrimp which enables them to cope better with stress factors. This includes pathogenic challenges such as those associated with Acute Hepatopancreatic Necrosis Disease.

Results from Trials at Arizona University



To develop the right combination, Skretting Aquaculture Research Centre (ARC) conducted a total of 18 challenge trials using 49 different diets, with over 30 different ingredients. One of these trials, conducted together with the University of Arizona, determined that a combination of different ingredients gave a better protection effect than just one component on its own. This blend formed the basis of Lorica.

The first sale of Lorica took place in November 2016 to shrimp farmers in Ecuador with promising initial results. “There is a lot of interest from the local farmers, and they are very keen to use preventative health solutions to support their shrimp against health challenges” says Truls Dahl, Global Product Group Manager. Work is also underway to test these diets in Vietnam with further positive results.

“The functional ingredients in our feeds enable shrimp farmers to take proactive steps that will support the primary defences of their stocks against environmental threats, while also playing their part in addressing the antimicrobial resistance challenge.” says Dr Charles McGurk, Manager Fish & Shrimp Health at Skretting ARC.

Although Loricin has shown promising results, it can't solve everything on its own. Optimal results are achieved when it is used as part of a management strategy together with feed management, good husbandry, good hygiene and proper monitoring.

“The functional ingredients in our feeds enable shrimp farmers to take proactive steps that will support the primary defences of their stocks against environmental threats, while also playing part in addressing the antimicrobial resistance challenge”



More from Less

FLX: A Step Change in Fish Feed Flexibility

Most food retailers and major seafood buyers in the food service industry sector are well aware of the environmental impacts and potential negative impacts on their brands when selling product associated with oceanic overfishing. Particularly the overfishing of fish stocks that supply the fishmeal typically required in many aquafeeds. As a matter of fact, the continuing dependency on fishmeal and fish oil ingredients in feed could be the limiting link in allowing aquaculture production to increase by 70% in the next 35-years to satisfy surging demands as is estimated by the United Nations Food and Agriculture Organization.

“Having greater flexibility in the diets allows us to improve production efficiency in terms of the cost per kilogram salmon produced”



Skretting ARC has devoted significant resources over the past three decades to exploring the potential for alternative raw materials to replace traditional marine-based feed components, while ensuring the final fish and shrimp products retain the eating and nutritional qualities that consumers expect. Aligned with this ambition, one of our biggest sustainability objectives has been to develop the capability to become independent of fishmeal. Launched in 2016, MicroBalance FLX is the biggest breakthrough in this work to date.

“The arrival of MicroBalance FLX and becoming independent of fishmeal is a major breakthrough for the salmon sector and the aquaculture industry as a whole. Making a constrained resource like fishmeal interchangeable – just like any other raw material – is crucial progress. However, FLX does not bring an end to Skretting ARC’s MicroBalance research. Quite the contrary, it is providing the platform to explore more alternative and novel raw materials for application with many more commercially farmed species with a view to progress the sustainable growth of the global aquaculture sector further,” says Ronald Barlow, Skretting Chile’s General Manager. After its launch in Chile, several salmon producers

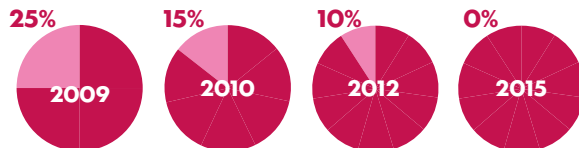
decided to use Premium FLX as part of their productive strategy. As a result, in 2016 alone, we dispatched significant volumes of FLX-based feeds formulated without fishmeal, equating to the diet of more than 7 million salmonids.

At the same time, Skretting Chile conducted a benchmarking study with Marine Harvest comparing our Premium diet (5% fishmeal) with Premium FLX (0% fishmeal) at a seawater farm site growing Atlantic salmon. Results found no difference in salmon growth, size and feed conversion or in the final product quality, fat content and pigmentation.

“Having greater flexibility in the diets allows us to improve production efficiency in terms of the cost per kilogram salmon produced. This provides valuable support to sustainable growth of the aquaculture industry, as we no longer depend on specific raw materials such as fishmeal to produce a safe and tasty salmon product,” says Bente Torstensen, Marine Harvest’s Group Manager, Feed and Fish Performance.

We are working hard to influence the supply chain to adopt this revolutionary concept; however the decision to do this ultimately lies with the fish farmers. This decision is often based on factors such as consumer expectations and the relative costs of fishmeal compared to its substitutes. It is not easy to change these attitudes towards quality and price quickly, however we are committed to continue trying.

Trends in Fishmeal Content of Skretting Salmon Feeds



Helping Farmers to Produce More from Less

Mycotoxins are toxic substances that are produced by moulds and can easily develop on crop based feed ingredients in the event of adverse weather during growth and when grain kernels are damaged during harvesting and storage. Animals fed with mycotoxin contaminated feeds often show reduced feed intake, immune suppression and fertility problems all of which reduce animal productivity.

This issue is of particular concern in areas where the conditions are naturally hot and humid. Despite applying sophisticated methods to analyse mycotoxins in centralized laboratories in many countries, the time to undertake this assessment can often take several days. However feeds need to be produced continuously for ongoing animal farming operations, the feed producer will be left in uncertainty of possible mycotoxin contamination in its daily feeding operation.

To support feed producers managing this risk, Trouw Nutrition offers a quicker method of quantifying the most common six mycotoxins. This method is named Mycomaster and the test kit involved can easily be transported to each feed mill or integrator farm in order to analyse more than 40 different feed raw materials or finished feeds on the spot by a rapid mycotoxin analysis. The data generated from the Mycomaster users worldwide is anonymously sent to a central management database known as the NutriOpt Mycotoxin Advisor. This is then consolidated to provide farmers with information regarding the mycotoxin risks currently associated with purchases from specific countries, thus enabling them to make smarter decisions on how to manage the mycotoxin risk.

This tool and the associated documentation also advises farmers on the most suitable Trouw Nutrition feed additives and the optimal dosage to reduce the mycotoxin risk and ensure optimal animal performance. This integrated approach to mycotoxin risk management provides farmers with the tools needed to make smart decisions regarding the purchase and treatment of feed ingredients. By doing so it enables them to produce more from less.



Measuring the Impact of our Products from Cradle-to-Grave

The NutrECO-line assessment tool was developed in 2013 with the aim to measure the sustainability attributes of Nutreco's global products. This concept has evolved over a number of years into a more refined and precise tool that enables us to assess the environmental impacts of specific nutritional solutions using Life Cycle Assessment.

This Life Cycle Assessment tool was developed in collaboration with Blonk Consultants and uses the Agri-Footprint database which is the leading life cycle inventory for the agriculture and food sector. The impacts assessed are greenhouse gas emissions, fossil energy use, acidification and eutrophication.

The comprehensive scope covers the cultivation of the crops used in the feed, right through to when the animal leaves the farm at the end of the production cycle. To date, we have developed models for pigs, poultry and dairy systems. We have also developed a customer factsheet that summarises the results of a poultry assessment. This has been shared with our customers with the aim is to create sustainability awareness and encourage the supply chain to adopt Sustainable Development Goal 12 (sustainable production and consumption).



Highlighting the Sustainability Attributes of our Nutritional Solutions

To ensure sustainability is part of the story told about our products and services, an e-Learning module was developed in 2016 to raise internal awareness. This module provides employees with an overview of the major sustainability challenges facing the feed-to-food value chain, and the solutions Nutreco is developing to overcome these. It specifically showcases the Trouw Nutrition Healthy Growth Initiative and Skretting's Premium FLX to demonstrate how these can help to improve the sustainability performance of our customers.

In December 2016 the module was sent to 1,500 employees from sales, marketing, procurement and general management. Whilst the module is not mandatory we will actively encourage people to undertake it and follow up on participation rates throughout 2017. ■



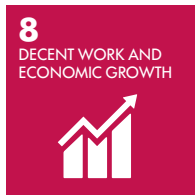
4. OPERATIONS

A large industrial warehouse filled with stacks of white sacks, with two workers in white coats and hard hats walking through the aisles. The image is overlaid with a green semi-transparent filter.



Operations

We strive to minimise the negative impacts of our direct operations and create valuable employment opportunities for the communities in which we operate. These efforts directly address the following United Nations Sustainable Development Goals.



Productive employment and decent work are key elements to achieving sustainable economic growth and poverty reduction. At Nutreco, we provide employees with a safe and secure working environment through the implementation of HSE Standards as well as our Code of Ethics, which clearly outlines our zero tolerance approach to discrimination and child labour. We also go beyond these fundamental basics by creating opportunities for our employees to develop their professional skills and engage in meaningful work through the provision of training and career development. These initiatives not only add value to the lives of our employees and the communities in which we operate, but it also helps to improve the productivity of our operations.



Our production plants consume natural resources including water and non-renewable fuels in the process of making feeds. We also produce some undesirable wastes and emissions. To ensure our operations remain sustainable we must manage these inputs and outputs in a responsible manner. Nutreco has implemented a system of data collection and the quarterly reporting for four environmental KPIs – energy, greenhouse gases, water and waste. This data is used to inform management on the performance of our operating sites, which enables them to identify opportunities for sustainable production and consumption. This drives shared value by improving the efficiency of our operations as well as reducing our environmental footprint.



The United Nations 2016 Paris Agreement on climate change entered into force in 2016. This sets a global action plan to avoid dangerous climate change by limiting global warming to below 2°C. To meet this ambitious target governments, business and society need to work together to reduce emissions. Nutreco is working to reduce our footprint through improvements to energy efficiency and shifting to energy sources that are less emission intensive. This adds value to our bottom line by reducing costs whilst also contributing to the fight against climate change. We also honour our commitment to reduce our carbon footprint by 50% from a 2009 baseline through the purchase of offsets which support the development of sustainable energy systems.

Sustainability Manufacturing KPI Reporting

The sustainability manufacturing KPIs refer to five environmental and social measurements that Nutreco committed to set as focus areas for our direct operations. At this point in time we have not set targets, but rather we are focused on implementing data collection and recording systems that enable us to accurately measure these variables across our global business. To do so we initiated a program in 2015 with 49% of our sites to report quarterly on these KPIs in our financial system.

In 2016, we extended the scope of our integrated quarterly reporting to include BU Asia, BU Americas, and BU Nutreco Iberia. Together with the other three BUs which reported in 2015, we are now covering 100% of Nutreco production sites⁸. The overall results for 2016 per BU are shown in the table on the following page.

Achieving consistent reporting throughout our global operations has proved to be challenging.

In particular, waste has been difficult due to many of the sites using definitions and estimation methods that differed to those outlined in the Nutreco Guidance Document. In order to overcome this issue, we have revised the guidance to provide more explicit instructions on how to define and measure waste. We have also introduced a series of corporate controls and data checks that take place on a quarterly basis with the aim to identify and address significant variations in the data. Further to this, we have run workshops at our facilities in Vietnam and China to explain the guidance in more detail and to work together with local teams to resolve any inconsistencies. Following the success of these workshops, more are planned in various locations throughout the Americas in 2017, including Ecuador, Brazil and Mexico.

⁸ Newly acquired companies are out of scope for the first three years after purchase

When comparing the overall results for the three BUs that reported in 2015⁹ on a per tonne of saleable feed basis, there was a reduction in most of the KPIs with the exception of waste and lost time injuries which increased by 6% and 12%, respectively. These increases and decreases were the results of normal annual variation, however we plan to put in place structured efficiency programs to achieve reductions in the future.

Making our operations more sustainable is made complicated by the trade-offs that can occur between different sustainability measures. For example, many of our aquafeed production sites use an extrusion process to create pellets. This process requires additional energy and water compared to the more traditional dry compressed pellets.

When sites decide to transition from dry compressed to extruded feeds we see an immediate increase in the energy and water use per tonne. Whilst from an operational perspective this is not good, these pellets

are much more robust. This has multiple sustainability benefits when the pellets are used on the farms because the fish consume more. This means more edible protein is produced from the same amount of feed, and fewer nutrients are released to the marine environment.

Case Study: Improvements in Water Efficiency at Skretting Australia

Water is a precious resource in Australia where droughts are common and predicted to increase in the future. Since water is a key input for the production of extruded fish feed we must use it efficiently. With this in mind the team at Skretting Australia embarked on a water reduction project in 2016, led by Manufacturing Manager, Stig Støver.

⁹ In 2015 BU Feed Additives, EMEA and GSFF were in scope. These represented 49% of all Nutreco sites.

Year on Year Comparison of the 5 KPIs from 2015 to 2016¹⁰



¹⁰ These results are from the 49% of OpCos that reported in 2015 and 2016

Overall Results per BU for 2016

	GSFF	FA	EMEA	Asia	Americas	Nutreco Iberia	Nutreco Total
Energy consumption (kWh)							
Total primary non-renewable energy	255,106,039	376,955	102,862,929	57,401,792	144,125,910	138,123,557	697,997,222
Total primary renewable energy	58,822,451				19,775,920		78,598,371
Total indirect energy purchased	150,598,682	662,682	26,013,292	31,241,217	88,833,020	153,426,475	450,775,368
Total energy consumption	464,527,172	1,039,677	128,876,221	88,643,009	252,734,850	291,550,032	1,227,370,961

Greenhouse Gas (GHG) emissions (tonnes CO₂)							
Total Direct GHG emissions	70,981	77	22,110	14,821	43,385	30,445	181,820
Total Indirect GHG emissions ¹	29,244	292	11,096	18,176	19,648	56,741	135,197
Total GHG emissions	100,224	370	33,206	32,998	63,033	87,186	317,017

Waste type (tonnes)							
Total hazardous waste	121	197	1,198	133	142	147	1,937
Total non-hazardous waste	9,132	75	4,540	2,417	13,653	16,420	46,237
Total waste	9,253	272	5,738	2,550	13,795	16,567	48,175

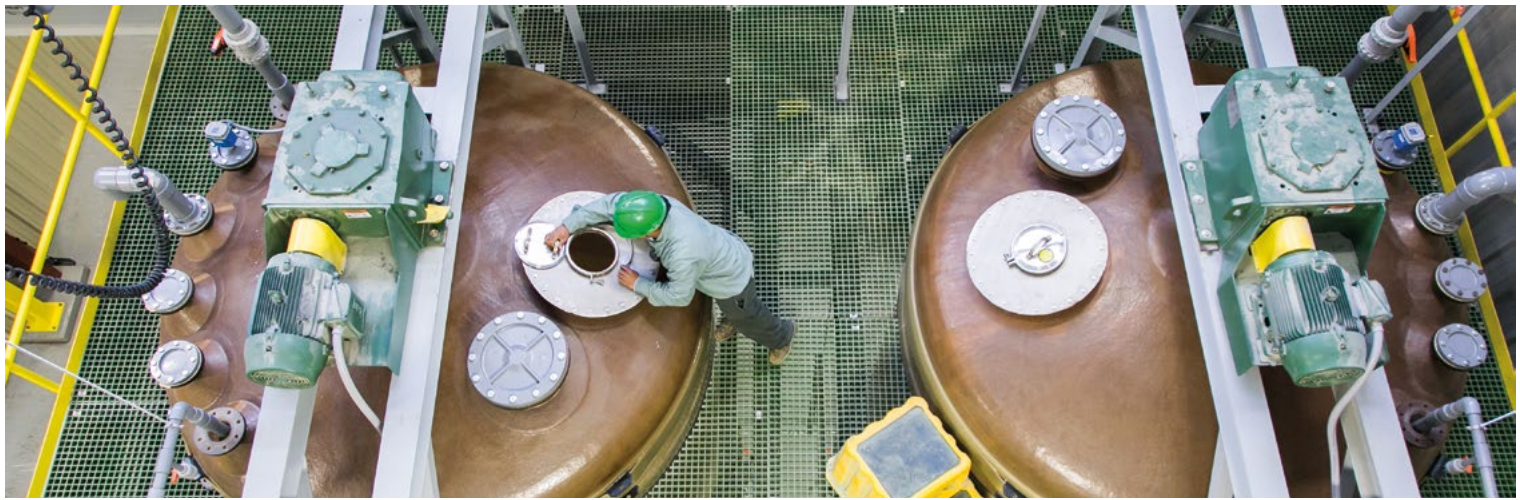
Water (m³)							
Total water consumption	834,163	5,924	147,579	263,816	331,064	1,919,514	3,502,060

Lost Time Injuries

There was an additional 16 lost time injuries that are not recorded here since they took place on non-production sites that are out of the scope of Sustainability Manufacturing KPIs project. These are recorded and addressed through the HSE department.

Total lost time injuries	15	0	14	3	58	54	144
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¹All emissions from indirect energy were offset by purchasing green electricity certificates. With this offset we have reached our target to compensate 50% or more of our CO₂ emissions of our 2009 baseline, when excluding the acquisitions.



When asked about how this was achieved, Støver explained, “Three key reduction areas were identified for improvement. The first involved the reduction in the amount of water used in the extrusion process through the modification of our process settings and the formulation of feeds. These changes also improved energy usage, and in many cases even improved product quality. The next focus was to implement a water recycling system, which made a profound impact. Up until that point, water was used and then discharged, but now it is recycled and hence we have reduced the need to purchase municipal water. Last but not least, we optimised the volume of water required to irrigate our bio-filter functionality. As such, we also reduced the cost of buying water, but more importantly it reduced the volume sent to waste water treatment.”

“These improvements resulted in a water reduction of 20% per tonne of feed compared to 2015 and has had a significant impact on the environmental footprint of our operations” says Støver. “The coming year will be about consolidating the results, but the focus will continue within operations to further increase our operational efficiencies.”

Case Study: Improvements in Energy Efficiency at Trouw Nutrition Voronezh

Our production plant in Russia reduced its energy use by 26%, dropping from 111kWh/tonne in 2015 to 82kWh/tonne in 2016. This was achieved through a combination of initiatives including reducing the temperature of the coolant, installation of temperature regulation systems, fitting of light sensors and replacing lamps with LED lights. There was also the added benefit of increased production which improved the efficiency due to economies of scale.

“It is obvious that saving energy reduces our costs. But it is also crucial for achieving a sustainable performance and ensuring we uphold our own commitment with society. For this reason, my colleagues and I are proud to contribute to the efficiency of the company,” says Alexander Shol, Operations Manager.

Safety First

Ensuring all of our workplaces around the world are safe environments in which to conduct our operations has always been a top priority for Nutreco. Being a global company, there is no specific one-size-fits-all when it comes to health and safety due to the multiple differences between established and emerging markets. For example, some countries traditionally have a lot of hierarchy in place and lines of communications are structured differently. From an operational standpoint, certain practices such as the manual carrying of heavy bags of raw materials are still commonplace in some emerging markets, while long being unacceptable in established operations.

Nutreco has made good progress in addressing such areas in recent years, which has been helped by the introduction of more mechanisation and better-organised operations. In Ecuador, for example, we are building plants to not only replace current facilities but also to expand our production volume and business in the Latin America region. We have also recently completed a new fish feed plant in Egypt; we are currently building one in Vietnam; and we have plans for one in Nigeria. With each of these developments there has been a strong focus on the health and safety elements.

While the solutions applied to OpCos and BUs can and do differ, Nutreco ensures that the same robust standards are applied globally. This is achieved through the regular audit of all operations – a process that identifies any health and safety shortcomings or “non-conformities” and provides an appropriate timescale to rectify each. All non-conformities are monitored through a live reporting system.

“These efforts are appreciated by all of our auditees because they recognise we are helping to improve their operations. In our opinion, health and safety and good operations go hand-in-hand: We don’t want to have waste and we don’t want accidents; instead what we do want is to have optimal professional operations. That includes health and safety,” Harm Teunissen, HSE Director.

Each operation is also subject to a rating programme, where their health and safety compliance is scored and reported. To assist these processes, each operation is organised in such a way that it has an individual responsible for health and safety. There is also a Health & Safety Executive Network, comprising some 20 representative members from across the business globally, which physically meets every year and interacts as much as possible to address the relevant topics.

“Safety depends on a number of things. Not least, how things are organised, how people are trained, whether the plant is following the clearly defined standards and the provision of comprehensive inspections. A combination of the entire package delivers a certain safety level, but awareness is key,” says Teunissen.





Building a Capable and Engaged Workforce

We aspire to be the best employer in animal nutrition and aquaculture by offering a uniquely international and high-quality working environment in which performance and world-class leadership is encouraged and expected.

Our people focus in 2016 had various quantitative and qualitative elements. In terms of quantity, we put substantial effort in expanding the scope of our global HR process in order to include more people in existing countries such as Brazil and Russia as well as staff within newly acquired companies' including MicroNutrients in the USA and Skretting in Ecuador.

Considerable efforts have also been made to review our global human resources processes to improve their efficiency and impact. Notably, conferences organised by BU human resources have helped to harvest ideas for improvement as well as better embed the concepts underlying our global processes and policies, which are performance management, goal setting, reward and talent.

Employee Data	2016	2015
Number of employees at year-end	11,545	10,967
% women	26%	27%
Employees in growth geographies (Asia, Africa and South America)	4,262	4,127
Part-time employees (%)	5%	6%
Employees per Segment	2016	2015
Animal Nutrition	5,279	4,903
Fish Feed	3,026	2,843
Compound Feed & Meat Iberia	2,925	2,943
Corporate	315	296

We have continued to invest in people and leadership capabilities. The Advanced Management training sessions and Emerging Leaders programmes were intensified in 2016 and will also continue into 2017. Key account management and value selling training have also been continued as these are seen as key skills to underpin our growth ambitions. We have also increasingly leveraged our “learning management system” in order to deploy e-learning in various functional areas, including sustainability, legal and R&D. Our successful ‘Culture Champions’ programme continued in 2016 with more than 100 local champions actively engaged across most of our OpCos. These employees are tasked with a part-time responsibility of carrying out actions to support and encourage local culture development.

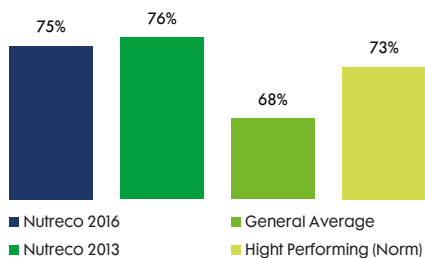
The significant efforts made by this group during 2016 were recognised at our management conference in September where the programme was granted numerous best-practice awards.

Employee Survey

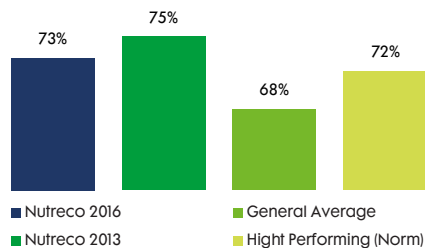
In September 2016, Nutreco invited 5,500 employees from throughout the global business to take part in an employee engagement survey. This was a follow up to the leadership survey done in 2013 which was targeted the top 1,250 senior managers. The aim of the survey was to determine the level of motivation amongst Nutreco employees and identify the barriers that prevent them from performing at their best.

This project was run in collaboration with Korn Ferry Hay Group, the human resources consultancy that developed the questionnaire and tailored it to fit Nutreco's requirements. The survey consisted of 46 questions covering 17 dimensions of which employee engagement and enablement were identified as the two key drivers of effective employees and positive business outcomes.

Employee Engagement



Employee Enablement



Engagement is achieved when companies stimulate employees' enthusiasm for their work and direct it towards organisational success. Enablement refers to whether the work environment supports employees to channel their enthusiasm into productive action.

The response to the survey was better than expected with a total of 4,428 employees (81%) taking part. Results were compared to those from the 2013 Nutreco survey as well as data provided by the Korn Ferry Hay Group for the general industry average¹² and the top 10% high performing companies¹³ they have surveyed.

Overall, the results indicated that Nutreco employees were motivated and happy with the working conditions. Nutreco scores particularly well on employee engagement (75%) and enablement (73%), showing that we compare very favourably to both the general industry average and the top 10% high performing average.

The results not only identified areas where Nutreco was performing well, but also gave an insight into the areas that need further attention in the future. This includes providing employees with a clear and promising direction, performance management and reward cycle and collaboration. Individual action plans are also being developed for each of the OpCos and BUs to ensure that follow up is given and that local differences are addressed accordingly.

¹² General average for all companies surveyed worldwide over the previous three years which covered a total of 350 organisations and approximately 6.8 million employees.

¹³ Top 10% high performing companies includes 30 organisations with approximately 600,000 employees.

Feed-to-Food Quality and Safety

In the value proposition of Nutreco companies, quality and safety play a crucial role. We are putting these ambitions into practice through the further development of Nutrace®, our global feed-to-food quality and safety programme.

In 2016, the emphasis was on the continuation of the implementation of integrated quality management. This refers to centrally organised, cross-department initiatives that are focused on ensuring product quality and safety and takes into account a growing number of quality attributes, from food safety, nutritional and physical quality to specific value chain requirements.

Another important milestone was the revision of the Nutrace® risk assessment. The scope of the traditional hazard analysis and critical control points (HACCP) methodology was extended from feed and food safety to a broader assessment including a variety of quality attributes, reputation and compliance with international standards and schemes. The final result is a uniform, multi-purpose 'Nutrace®-HACCP' system that contributes to the protection of brand value and product liability. Implementation is underway in all Trouw Nutrition and Skretting companies.

In a joint initiative with representatives from the quality, procurement, formulation and IT community, a harmonised way of naming and categorising feed ingredients was introduced. Moving forward, establishing robust masterdata management will be crucial to the further development of additional Nutrace® tools to help support the ambition of being the feed supplier of choice.

Sharing of best practices and employee training were the core aims of the second Nutreco Quality Conference, a joint initiative of Skretting, Trouw Nutrition and MasterLab. The theme of the conference, 'Quality Tomorrow Today', was a reference to two major questions that should be in DNA of all quality and laboratory employees: How can we help our customers become more successful tomorrow than they are today? And, what do we need to do already today to be prepared for tomorrow? ■







5. INGREDIENTS



Ingredients

Nutreco is always seeking to expand our knowledge of the nutritional composition of feed ingredients as well as the impacts of the supply chains that create them. This helps us to deliver products that enable farmers to produce more from less, and by doing so addresses the following United Nations Sustainable Development Goals.

12
RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Responsible production and consumption requires us to look beyond the traditional aspects of cost and quality when making purchasing decisions. At Nutreco, we have identified the relevant sustainability issues in our Supplier Code of Conduct, which is signed by suppliers. Compliance with these requirements is then checked during supplier audits. We are also able to assess the environmental impacts of common feed ingredients using the detailed database which forms the basis of our Nuterra Product Assessment. From this we can model the impacts of different feed formulations which creates value for us and our customers by helping us to become more informed about the implications of our production processes.

14
LIFE BELOW WATER



The United Nations estimates that 31.4% of the world's fisheries are overfished and a further 58.1% are fished at full capacity. With 10% of the total global catch used to make fishmeal and fish oil the aquaculture industry plays a vital role in ensuring these stocks are well managed. To address this, Nutreco has identified minimum sourcing criteria for marine products in our Supplier Code of Conduct and Nuterra Standard. We have also partnered with other industry players, governments and NGOs in Vietnam and Peru to establish fishery improvement projects. This creates shared value by improving the state of the world's fisheries resources whilst also ensuring the supply of sustainable fishmeal and oil into the future.

15
LIFE ON LAND



The production of feed ingredients has significant impacts to life on land. This includes greenhouse gas emissions, biodiversity losses, deforestation and nutrient enrichment that arise from land clearing, fuels, pesticides and synthetic fertilisers. At Nutreco, we are dedicated to reducing these impacts by working with our suppliers. Our primary tool to do this is our Supplier Code of Conduct, which outlines what we require of our suppliers in regards sustainability. In addition to this, we annually purchase GreenPalm certificates to offset the use of all palm oil used in our products (excluding palm kernel oil). This creates value by supporting the development of more sustainable production methods.

Minimising the Impacts Throughout our Supply Chain

Ensuring our suppliers are addressing material issues is one of the most challenging parts of the sustainability puzzle. In 2010, we developed our Supplier Code of Conduct to clearly outline what we expect of our suppliers in regards to key issues such as human rights, deforestation and labour conditions. We then asked our suppliers to commit to these criteria by signing a copy of the code.

The signing of this document has since become embedded in the supplier approval process, with all new suppliers asked to sign. In 2016, a further 994 suppliers signed the code, which together with existing signatures from previous years covers 86% of raw material spend. This is slightly lower than last year since the distribution of spend shifts from year to year which affects the percentage of spend coming from suppliers that have signed the code.

Our code has been a valuable tool to communicate with suppliers and other interested stakeholders on the sustainability issues important to Nutreco, however it fails to provide us with the assurances needed to be confident these issues are actually being addressed on the ground. With this in mind, we defined five key sustainability criteria from the code and incorporated them into the existing quality and feed safety audits we conduct at our suppliers.

In 2016, Nutreco undertook a total of 50 quality audits, of which 47 contained the five sustainability criteria. Two of these audits identified critical issues relating to sustainability, one of which resulted in the rejection of the supplier while the other supplier was approved with conditions. A further seven suppliers had major non-

conformities. Of these, four were disapproved, two were approved with conditions and the last was approved. The remaining suppliers were either in full compliance or had minor non-conformities. The most common recommendation from the audit was the need to set up a policy relating to sustainable supply chains followed by local improvements to HSE and labour conditions.

We recognise that sustainability audits play an important role in verifying compliance, and perhaps more importantly, the audit results facilitate longer lasting conversations around opportunities for continued improvement. We also recognise and grow increasingly uncomfortable that our capacity to internally audit a larger subset of suppliers is significantly limited. As such, we will commence a project in 2017 to compare the costs and benefits of various supply chain assessment options to find a suitable alternative. We are also engaging with other peer groups to explore ways of how this mutual challenge can be shared.

50 Quality audits



of which 47 covered the 5 sustainability criteria



Addressing Deforestation

Many of our feeds contain soy and palm based ingredients that come from production systems that potentially contribute to deforestation and the loss of other valuable ecosystems. To minimise the associated footprint of these purchases, Nutreco is an active member in both the Roundtable for Responsible Soy (RTRS) and the Roundtable for Sustainable Palm Oil (RSPO). Membership of these two groups keeps us in the conversation of how we can help shape progress.

As part of our effort to address the impact palm oil has in forestry and other valuable landscapes, Nutreco purchases book and claim certificates annually to offset 100% of all palm oil ingredients purchased in 2016, excluding palm kernel oil which accounted for 19% of our total palm oil purchased in 2016. We excluded palm kernel oil from our program for the time being. This is due to the limited availability of this product and the associated costs which are in the order of approximately 10 times that paid for crude palm oil in 2016.

For soybean and soy products the panorama is much more complex. There is a plethora of environmental standards commercially available and no real agreement. This is further complicated by the lack of widespread industry support for these schemes. The costs of certified commodity product (premiums) when there is limited coverage of specific deforestation issues or lack of commercial uptake in the market (limited demand) -has slowed our commitment to any one of the schemes available.

As such, we have piloted a step-wise approach with the purchase of Proterra soy concentrates in Skretting Norway from 2015 onwards. In 2017 we will explore options for extending this approach in the future. We have also engaged in multi-stakeholder platforms such as the European Feed Manufacturers Federation (FEFAC) that are focused on driving the entire industry towards a more sustainable approach. Nutreco is an active member of the FEFAC Sustainability Committee which recently launched the minimum criteria for responsible soy guidelines. Nutreco is also an active member of the US Soy Export Council Sustainability Committee.

We will continue our efforts to reach a shared understanding with all industry stakeholders on the best approach to move forward with a responsible soy (deforestation free) agenda.

Improving the Management of Constrained Marine Resources

There is a clear market demand for the fishmeal and fish oils used in aquafeeds to be defined as “responsibly managed”. In order to fulfill this demand, which we see only growing in the future; we look for potential fisheries that can give a predictable supply of responsibly managed marine ingredients. It is our judgment that the Peruvian anchoveta fishery is well positioned to meet such a demand. Today, we have a growing demand from our customers to demonstrate this through delivering feed compliant with the Aquaculture Stewardship Council (ASC) standards.

In a proactive move towards securing our supply of ASC compliant marine ingredients, Skretting and Cargill Aqua Nutrition joined together and approached members of the Peruvian fishmeal and fish oil industry to discuss the implementation of a fishery improvement project. In cooperation with the Peruvian National Fishery Organisation (Sociedad Nacional De Pesquería), there is now agreement to establish the fishery improvement project in Peru,

with final action plans currently being established. This fishery improvement project aims to strengthen research, management and sustainability of the Central and Northern Peruvian anchovy fishery. The project will include a benchmark against the Marine Stewardship Council (MSC) fisheries standard. The project will follow the guidelines for a comprehensive fishery improvement project set out by the Conservation Alliance for Seafood Solutions to ensure its credibility and seek maximum collaboration with all stakeholders.

“The Peruvian fishery improvement project is one example of how Skretting has shown true leadership towards the sustainability of the aquaculture industry. This vision for pursuing responsibly sourced ingredients has given us the assurance to meet our customers demand for sustainable seafood via our Aquaculture Stewardship Council certified products,” says Linda Sams, Head of Sustainability at Tassal Group Limited, Australia’s largest farmed salmon producer. ■

“The Peruvian fishery improvement project is one example of how Skretting has shown true leadership towards the sustainability of the aquaculture industry”



A photograph of a person wearing a hat and light-colored clothing, sitting on a large sack in a field. The person is surrounded by several cows, some of which are lying down. In the background, there is a metal fence and trees. The entire image is overlaid with a semi-transparent blue filter. The text '6. COMMITMENT' is written in white, bold, sans-serif font in the upper right quadrant.

6. COMMITMENT



Commitment

At Nutreco, we believe a sustainable future is not viable without the involvement of motivated people. Therefore, we are actively engaged with internal and external stakeholders to achieve common sustainability goals. This addresses the following United Nations Sustainable Development Goals.



The majority of population growth over the coming decades is predicted to occur in emerging markets. In order for them to achieve the productivity gains required to feed these additional mouths, they need access to the technology and know how that has enabled farmers in the developed world to produce more from less. Nutreco is helping to bridge this gap by investing in community development projects focused on capacity building for small scale farmers in emerging markets. This offers opportunities for shared value by improving the profitability and productivity of the farmers, whilst creating future opportunities for Nutreco in these markets.



Given the scale of the sustainability challenges facing the world, it is impossible to achieve progress in isolation. This can only be achieved if partnerships are formed between all segments of society including business, government, NGOs and communities. Collaboration is part of our company values at Nutreco and this can be seen through our long-term involvement in external partnerships and multistakeholder platforms. This includes our biannual AgriVision and AquaVision conferences as well as the Pincoy Project in Chile, the Seafood Business Ocean Stewardship, and our community development projects in Nigeria and Indonesia.

Bridging the Gap – Transferring Technology to Farmers Around the World

In the past, Nutreco has had limited success with Community Development projects that were based purely on philanthropic principles. As a result, we transitioned to an approach more aligned with Michael Porter's (Harvard Business School) concept of 'Creating Shared Value'. This redefines the corporation's role in society by linking the corporation's strategy with the health of the community around it. We adopted this approach in 2014 with two projects, one with catfish farmers in Nigeria and another with dairy farmers in Indonesia.

Nigeria Catfish Project

Fish represents an important part of the diet for people in Nigeria. Although the country has a significant aquaculture sector, the demand for fish still exceeds supply. Therefore, an increase in the production of farmed fish will secure both an affordable and nutritious food supply.

In 2015, Nutreco partnered with Oxfam and two Nigerian NGOs to undertake a one-year pilot project to support small-scale catfish farmers from around Ibadan in Nigeria. The aim of the project was to increase the productivity, profitability and sustainability of their operations so they could benefit from the economic opportunities in an environmentally sound manner.

A total of 94 farmers participated in the project that took place between July 2015 and August 2016. During that time, a series of training sessions were run by the project partners on topics such as feed management, disease and water quality. A detailed data management system was also developed to enable farmers to collect better data and compare performance overtime.

The project resulted in the adoption of better feeding practices amongst the farmers. It also advanced the technical capabilities of the farmers and identified market conditions that affect the profitability of farmers. In addition, it created an opportunity for networking amongst farmers which facilitated open sharing of information which had not occurred in the past.

The farmers involved in the project were very enthusiastic and expressed a desire to continue in the future. "I have learnt so much during this project in terms of daily record keeping, calculating feed conversion ratio, test cropping and how to disinfect the ponds" says Nigerian farmer, Dahunsi Olufemi Joshua.

"I have learnt so much during this project in terms of daily record keeping, calculating feed conversion ratio, test cropping and how to disinfect the ponds"

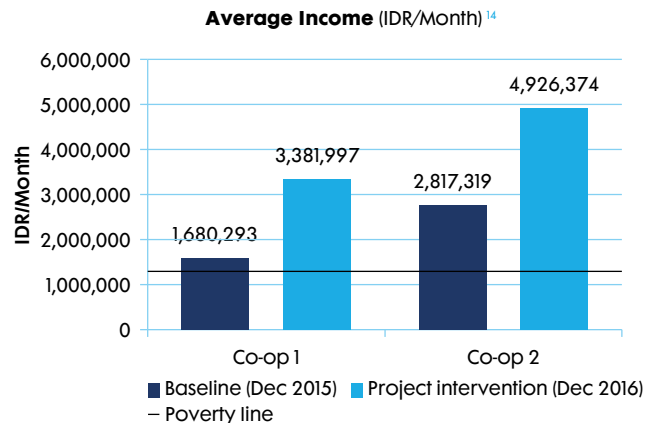
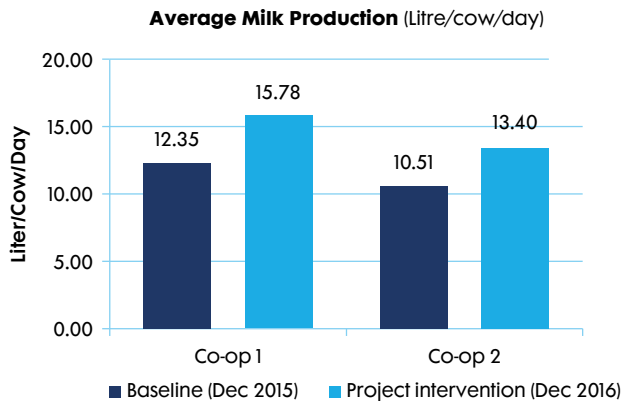
As such, Nutreco has decided to extend the project for two years with the aim to further improve and document the profitability and productivity of the farmers. In 2017 we will partner with the local NGO to implement Phase 2. In this next phase, Nutreco will continue to work directly with farmers and has appointed a dedicated Project Manager at our local Skretting Nigeria office to plan and execute the project. Oversight will include technology extension service with structured workshops and routine farm visits dedicated to instruct farmers, share learnings from other farms and best management practices. Skretting will offer feed commensurate with high growth performance and maintaining high water quality. "I am very happy to be working on this project and am confident it will deliver positive results for the farmers who take part," says Omoniyi Ajitoni, Project Manager.

Indonesian Dairy Project

Demand for dairy products in Indonesia has increased by more than 10% on an annual basis over the past decade. While this offers enormous opportunities for local producers to improve their livelihoods by increasing their production to meet this demand, sub-optimal production rates have made the country reliant on imports instead.

In 2015, Nutreco established the Trouw Nutrition Dairy Sustainability Programme as part of the joint food security initiative run by the Dutch and Indonesian governments. The aim is to increase average milk production and improve the livelihood of smallholder dairy farms in West Java.

Preliminary Results from 16 Pilot Farms in Indonesia



Nutreco has appointed a dedicated project manager and two field officers to lead this project, with support from staff with skills in animal nutrition, marketing and laboratory services. Through this programme, Nutreco is assisting in the transferring knowledge and technology for two focus areas:

1. Proper and best choice of forage material as feed for dairy cows; and
2. Supplemental feed quality control, feed formulation and feeding practices.

Two dairy cooperatives were chosen to take part in this project which represents a total of 1,796 small farmers. Of these, 16 demonstration farms were selected and trained in best practices for the two focus areas described above.

Preliminary evidence from the 16 demonstration farms in the first two years of the project suggests the initiative has been very successful in achieving its objectives. Both cooperatives have increased their cows' milk output (production) by 28% on average. The resulting increase in cow productivity has increased the small-scale farmers' monthly income in both cooperatives by an average of 88% (75% and 100%, respectively) over their near subsistence income levels before enlisting in the programme.

These farmers are now empowered to train the other members of the group who will assist in extending this program to a larger group of farmers in 2017.

"By applying maize silage as the main fodder source and following the feeding practices as advised, I have significantly benefited from a saving of feed cost," states a farmer who owned four cows.



"By applying maize silage as the main fodder source and following the feeding practices as advised, I have significantly benefited from a saving of feed cost"

Joining Forces to Transform the Global Seafood Industry

Nutreco was one of eight influential seafood companies that came together in December 2016 to form the Seafood Business Ocean Stewardship. This first-of-a-kind partnership aims to lead a global transformation towards sustainable seafood production and a healthy ocean. Amongst the issues addressed is the need to reduce the global extent of illegal, unregulated and unreported (IUU) fishing and inhumane working conditions.

The initiative was initiated by the Stockholm Resilience Centre and based on its research which gave rise to the idea of gathering the keystone actors in the seafood industry to create unified transformation of the seafood industry.

“We were delighted so many companies accepted our offer. This shows that they recognise their role and that they understand how important they are in their efforts

to develop and save the world’s fish resources,” says Henrik Österblom, project leader and Head of Research at Stockholm Resilience Centre.

Participants in the first dialogue produced a joint statement that outlines their concern about the current and future state of the ocean, and identifies a number of areas that they will address together. All eight companies involved will follow up efforts in 2017 with discussions on specific measures to be taken.

“I believe this represents a good start to something which can become important in improving the sustainability of seafood. First and foremost because it is a real global initiative; Secondly, and equally important, it links the challenges in wild fisheries and aquaculture. I look forward to translate our joint commitment into concrete actions,” says Knut Nesse, CEO of Nutreco.



Pincoy Project

The Chilean salmon industry has long been criticised for its extensive use of antibiotics. The primary reason for the high usage of these medicines has been to combat Septicemic Rickettsial Syndrome, a bacterial disease that has hit the Chilean salmon industry hard for many years.

Growing pressure from governments and consumers has resulted in a strong focus from industry to reduce antibiotics in recent years. Although this has led to the development of many useful innovations, none of these have resulted in large-scale improvements as they were all deployed in isolation. To overcome this challenge Skretting initiated the Pincoy Project in 2016 to bring together industry partners from various stages in the Chilean salmon production chain to find a holistic solution. Participants include Skretting, AquaGen/Blue Genomics, Pharmaq, Centrovet, Cermaq, Blumar and Ventisqueros.

The project aims to halve the use of antibiotics on pilot farms by the end of 2018. To achieve this ambitious target, an all-inclusive approach has been adopted that incorporates the skills of the various project partners. This includes selective breeding, high quality hatchery diets, smolt selection, vaccines, preventative nutritional solutions and the implementation of best-practice protocols and monitoring throughout the production cycle. This collaborative approach has received a warm welcome from the industry and beyond.

“As a farming company, we actually grow the fish. All the knowledge of all the partners in the value chain is coming together on our farms and is implemented there. It’s great to work with new and highly innovative techniques and procedures,” says Julio Mendoza,

Director of Research & Development at Cermaq Chile. Despite this enthusiasm, working together to achieve a common goal is not without its problems.

“The biggest challenge has been intensifying the collaboration and increasing mutual trust. At the beginning, I thought ‘we’ll get everyone around the table and then the rest will be plain sailing’. But it took months and not weeks until all the working groups in the project were up and running,” says Ronald Barlow, General Manager Skretting Chile.

The best way of continuing to intensify mutual collaboration is to show what it delivers. “We are expecting to achieve good results in the period to come,” says Barlow. “This motivates people to proceed in a co-operative way. Pincoy is a global model project and we’re confident that this initiative will contribute to our industry. I hope and expect that it will also inspire others.”



UN High-level Meeting on Antimicrobial Resistance in New York

In September 2016, Nutreco CEO Knut Nesse joined global leaders at the United Nations high-level meeting on antimicrobial resistance in New York.

The United Nations Declaration as adopted at the United Nations General Assembly referred to antimicrobial resistance as the biggest challenge to public health of modern times. Nesse made a case for substantially reducing the use of antibiotics in food production.

“With a holistically integrated approach based on farm, feed and health management, antibiotic use can be reduced significantly on a global scale – with equal or even improved productivity,” he says.

Following this, Nesse attended the One Health Summit in Washington DC at which he stressed the need to develop alternatives to antibiotics. “We face an immense challenge to feed a growing world population, while at the same time the environmental pressure on the planet must be halved. So

more food needs to be produced with fewer resources. It is inevitable that we reduce the amount of antibiotics used in food production significantly. We can only achieve this if we redirect our focus to alternative strategies.”

Involvement in Multi-stakeholder Platforms

As part of our engagement efforts, and in addition to our membership of Roundtable for Responsible Soy the Roundtable for Sustainable Palm Oil and the European Feed Manufacturers Federation Sustainability Committee, we also participate and are members of the Aquaculture Stewardship Council (Nutreco was member of the supervisory board during 2010 and-2015), the Monterey Bay Aquarium Seafood Watch (Aquaculture Technical Advisory Committee) and the US Soy Export Council Technical Advisory Committee. These fora support our efforts to promote sustainable sourcing.



“It is inevitable that we reduce the amount of antibiotics used in food production significantly”

AquaVision

For 20 years, Nutreco has hosted two major biennial conferences, AgriVision and AquaVision. These multi-stakeholder platforms bring together board-level executives, influential public officials and key members of the NGO community to discuss issues facing the feed to food value chain now and in the future.

The 11th edition of AquaVision was attended by more than 375 delegates from 35 countries. The theme was 'Meeting tomorrow today' with speakers covering a wide variety of topics including sea lice, fishmeal, human nutrition and population growth. The global megatrend of antimicrobial resistance was highlighted by Nesse as one of the most pressing issues facing the aquaculture industry, with calls for industry to work together to remedy the situation.

Keynote speaker Lord Sebastian Coe urged the industry to increase awareness among young people in order to achieve its goal of feeding a growing population. "The message needs to be clear, explain what you're doing and why; explain what you can achieve; pose a challenge and place yourself as the solution," he advised delegates.



Community Day

On 16 September, Nutreco colleagues across Europe, Middle East and Africa joined forces to express Nutreco's corporate value of caring. Approximately 1,400 from 16 countries enrolled to take part in 35 community projects, which was a significant increase from the 312 that took part in 2015. A wide range of activities were organised, centring on nature, caring and building.

Each site was asked to make a 20-second video that captured the spirit of the day. These films were submitted and compiled to create a fantastic presentation that was shown at all sites. Thanks to the energy and enthusiasm of these teams, the original target of making this project global by 2020 will be brought forward to 2017. ■



Assurance report of the independent auditor

To the readers of the Sustainability Report 2016

Our conclusion and opinion

We have reviewed (limited assurance) the data related to Greenhouse gas emissions, Water consumption, Waste, Energy consumption, Lost time injuries (LTIs) and Produced tonnes (hereafter: HSE data) and we have audited (reasonable assurance) the other information in the Sustainability Report 2016 (hereafter: the Other Sustainability Information) of Nutreco N.V. (hereafter 'Nutreco') based in Amersfoort.

Based on our review, nothing has come to our attention to indicate that the HSE data are not presented, in all material respects, in accordance with the internally developed criteria as described in the section 'About this report'.

In our opinion, the Other Sustainability Information is presented, in all material respects, in accordance with the GRI Sustainability Reporting Guidelines version G4 and the internally developed criteria as described in the section 'About this report'.

The Other Sustainability Information includes prospective information such as ambitions, strategy, plans, expectations and estimates. Inherently the actual future results may differ from these and are therefore uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the Other Sustainability Information.

Basis for our conclusion and opinion

We have performed our engagement in accordance with Dutch law, including Dutch Standard 3810N: 'Assurance-opdrachten inzake maatschappelijke verslagen (Assurance engagements relating to sustainability reports)', which is a specified Dutch standard that is based on the International Standard on Assurance Engagements (ISAE) 3000: 'Assurance Engagements other than Audits or Reviews of Historical Financial Information'.

The review procedures of the HSE data are aimed to obtain limited assurance. The audit procedures of the Other Sustainability Information are aimed to obtain reasonable assurance. Our responsibilities under this standard are further described in the section 'Our responsibilities for the review of HSE data and the audit of the Other Sustainability Information' below.

We are independent of Nutreco in accordance with the 'Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten' (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. Furthermore, we have complied with the 'Verordening gedrags- en beroepsregels accountants' (VGBA, Dutch Code of Ethics).

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion on the HSE data. We also believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on the Other Sustainability Information.

Key review and audit matters

Key review and audit matters are those matters that, in our professional judgement, were of most significance in our review of the HSE data and our audit of the Other Sustainability Information. We have communicated the key review and audit matters to Nutreco management. The key review and audit matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our review of the HSE data and our audit of the Other Sustainability Information within the scope of our engagement as a whole and in forming our conclusion or opinion thereon, and we do not provide a separate conclusion or opinion on these matters.

Reporting on material aspects

Description - The information provided should be a comprehensive reflection of Nutreco's strategy, achievements and challenges in all material aspects to ensure stakeholders can obtain a complete overview of Nutreco's sustainability progress. Material aspects are defined as aspects of which the omission can have a substantial impact on the decisions of stakeholders.

This area was significant to our engagement as the assessment of material aspects is inherently subject to judgement and qualitative evaluation. Moreover, Nutreco's global interactions throughout the whole value chain mean that material aspects are not limited to the company boundaries, increasing the risk of omissions.

Our response - To evaluate whether the sustainability information contained all material aspects we analysed Nutreco's process to determine material aspects, taking into account Nutreco's strategy and operating environment. We discussed the process and the results with Nutreco management. We also conducted a media search and analysed comparable companies' reports to identify any topics that could potentially be material for Nutreco to report upon and compared the results with those identified by Nutreco.

Our observation - We observed that the information regarding the process for selecting material aspects is a proper reflection of Nutreco's approach and that relevant material aspects appear to be included on the basis of this.

Reporting scope of HSE data

Description - Nutreco has developed reporting guidelines for all business units reporting on HSE data. Whereas in 2015 approximately half of the business units were in scope of HSE reporting, the HSE data reporting scope includes all business units from 2016 onwards. Nutreco has consequently requested assurance on this full reporting scope. Nutreco further explains this in the chapter 'Operations'.

As a result of the above a significant part of the business units are first time reporters in 2016. This leads to an increased risk of inconsistencies or misstatements in reporting on the HSE data by these business units to the Group. Therefore we have identified the reporting of HSE data as a key review matter.

Our response - We performed a selection of site visits to the first time reporting business units to evaluate the quality of local procedures to ensure accurate and complete reporting of HSE data consistent with Nutreco's reporting guidelines. Furthermore we interviewed staff and management at Group level to obtain insights in the implementation of the reporting guidelines by the business units and the monitoring process that is in place to ensure accurate and complete reporting of HSE data.

Our observation - We did not observe significant weaknesses in the implementation of the reporting guidelines at business unit level.

Responsibilities of Nutreco Management for the HSE data and the Other Sustainability Information

Nutreco Management is responsible for the preparation of Nutreco's Sustainability Report 2016 in accordance with the GRI Sustainability Reporting Guidelines version G4 and the internally developed criteria as described in the section 'About this report'.

Nutreco Management is also responsible for such internal control as it determines is necessary to enable the preparation of the HSE data and the Other Sustainability Information that are free from material misstatement, whether due to fraud or error.

Our responsibilities for the review of the HSE data and the audit of the Other Sustainability Information

Our responsibility is to plan and perform the review and audit engagement in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusion and opinion.

For the HSE data in Nutreco's Sustainability Report 2016, our review is aimed at obtaining a limited level of assurance. Procedures performed to obtain a limited level of assurance are aimed at determining the plausibility of information and are less extensive than a reasonable assurance engagement. The level of assurance obtained in a review is therefore substantially less than the level of assurance obtained in an audit.

Our audit of the Other Sustainability Information has been performed with a high, but not absolute, level of assurance, which means we may not have detected all material errors and fraud during our audit when they exist.

We apply the 'Nadere voorschriften accountantskantoren ter zake van assurance opdrachten (RA)' (Regulations for Audit Firms Regarding Assurance Engagements) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Misstatements can arise from fraud or errors and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of users taken on the basis of the HSE data and the Other Sustainability Information. The materiality affects the nature, timing and extent of our review and audit procedures and the evaluation of the effect of identified misstatements on our conclusion and opinion.

We have exercised professional judgement and have maintained professional scepticism throughout the review and audit, in accordance with the Dutch Standard 3810N, ethical requirements and independence requirements.

Our main procedures consisted of:

- Performing an analysis of the external environment, obtaining an understanding of relevant social trends and issues, and of the organization's business;
- Evaluating the appropriateness of the reporting criteria and its consistent application, including the evaluation of the reasonableness of management's estimates;
- Interviewing management and relevant staff at Group level responsible for the sustainability's strategy and policy;
- Interviewing relevant staff responsible for providing the HSE data and the Other Sustainability information, carrying out internal control procedures on the HSE data and the Other Sustainability Information and consolidating the data in the HSE data and the Other Sustainability Information;
- Evaluating the design and implementation of the reporting systems and processes related to the HSE data and the Other Sustainability Information;
- An analytical review of the data and trends submitted for consolidation at Group level;
- Reviewing relevant data and evaluating internal and external documentation, based on limited sampling, to assess the accuracy of the HSE data.

For the audit of the Other Sustainability Information, our main procedures also consisted of:

- Testing the operating effectiveness of the reporting systems and processes related to the Other Sustainability information in the Sustainability Report;
- Testing relevant data and internal and external documentation, based on sampling, to assess the accuracy of the Other Sustainability Information.

Amsterdam, 11 April 2017
KPMG Sustainability
Part of KPMG Advisory N.V.

M.A.S. Boekhold-Miltenburg RA

Director

