How we can contribute to feeding 9 billion people in a sustainable way: Vision 2020
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In October of 2011 the United Nations announced the birth of the world’s seven-billionth citizen. It was a sharp reminder of the task ahead for everyone occupied in producing food: how to feed nine billion people sustainably by 2050? Rising incomes in the growth regions of Latin America, Russia, China and South East Asia add to the challenge as people switch to protein rich foods such as meat, fish, milk and eggs. Globally, animal protein consumption is expected to reach 465 million tonnes of meat and more than one billion tonnes of milk by 2050.

Nutreco operates at an essential link in the feed-to-food value chain, adding value to ingredients by converting them into safe, nutritious feed for animals and fish. To help farmers be more productive while reducing environmental impact we have computer models that predict farm performance according to the choices made and we provide management insights based on our extensive knowledge and experience.

Nutreco has strong fundamentals to build upon. We are one of the few global companies to cover both animal nutrition and fish feed. Our animal nutrition division is one of the pioneers in the industry and holds a global number two position in premixes. Skretting is the global market leader in the young industry of fish feed for carnivorous species. By transferring knowledge and technologies between the two divisions and between our developed and developing regions we are able to maximise our potential. The drive towards greater efficiency in feeds, with attention to ecology and economics, is inherent in the name Nutreco. Chosen in 1994 when the company was formed, it stands for nutrition, ecology and economy.

‘Doubling food production, while halving the footprint’
Feeding the Future

We believe the essence of Nutreco is expressed in three words: Feeding the Future. The United Nations report* estimates food production must increase by 70%. We believe that to be confident of feeding the world of 2050 sustainably we need to double animal protein production and halve the footprint. Sharing ideas and knowledge and cooperating along the feed-to-food value chain are vital for success. Each year, to promote action, we organise international Agri Vision and AquaVision conferences. In 2010 and 2011 we published two Feeding the Future booklets to share the optimism expressed at recent conferences and to generate greater awareness of the urgency for action.

Vision 2020

As sequel to the first two Feeding the Future documents, this booklet explains Nutreco’s sustainability vision towards 2020: how we can help to double world food production while halving the footprint. An objective that is integrated in our business ambition 2016 ‘driving sustainable growth’. Through sustainable growth Nutreco aims to become the global leader in animal nutrition and fish feed, delivering innovative and sustainable nutritional solutions.

Our sustainability vision is based on the classical combination of People, Planet and Profit and has been reviewed by both internal and external stakeholders. We are thankful for the feedback given and addressed as much as possible in this document. However, there are also challenges to be dealt with in the future such as further concretizing our ambitions and balancing the diverse interests of our stakeholders.

In this document we describe the key sustainability issues of our industry and highlight those where we aim to have the greatest impact. The 2020 horizon allows us to use an 8-year strategic framework. We can now align actions and business expectations within this framework. The path towards 2020 is, however, not set in stone. Our sustainability ambitions and critical milestones will develop over the years and be updated accordingly.

Conditions for success

To succeed we need more than a vision. Engaging and empowering people, inside and outside the company, is vital. Every change depends on the efforts and commitment of one or more individuals. Furthermore, we have to keep our customers and end-users, the farmers, in mind in all we do. In addition to helping them be more productive and environmentally and socially responsible, we need to ensure their businesses can prosper. That includes taking account of regional differences because every region has its own issues and challenges. Finally, we have to join forces with other parts of the value chain so together we can make the differences needed to achieve our industry goals.

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*"State of the World’s Land and Water Resources for Food and Agriculture", Food and Agriculture Organization of the United Nations, November 2011
OUR COMMITMENT
to feeding the future

Sustainability challenges for our industry

The growing world population, urbanisation, a growing middle class and changing diets will lead to a surge in demand for protein, especially in emerging markets. Of course, this brings opportunities for the feed industry to grow its business. However, there are sustainability issues. They include scarcity of resources, food safety, animal welfare, antibiotic resistance, pollution, climate change and loss of biodiversity. In addition, we must cope with volatile commodity prices, as supply and demand fluctuate, and with unbalanced cost/price distributions in the value chain.

Priorities differ at different stages of sustainable development. Societal objectives must be in balance when producing food in a sustainable way.

Analysing the challenges, we believe Nutreco is well placed to contribute to a more sustainable food chain. We have global presence, extensive and progressive nutritional know-how and high standards of feed-to-food quality and safety. These qualities are supported by excellent innovation and technical capabilities and the ability to translate our nutritional solutions into practical products matched to local needs.
Identifying the issues

Defining our vision began by identifying the key sustainability issues for our industry. We used surveys conducted by parties such as FAO, the World Economic Forum and the European Union, the topics raised at our biennial conferences Agri Vision and AquaVision and the local issue mapping conducted by our businesses worldwide. Our sustainability vision relates to those key issues where Nutreco can have the greatest impact.

Our role in the value chain

The resources of the world are being over exploited. Food production and agriculture are partly responsible, and have influence on climate change and loss of biodiversity. Nutreco is involved.

We buy agricultural and related products and supply feed and nutritional products to farmers producing meat, eggs, dairy and fish.
Our commitment

In 2020 we will have significantly reduced our environmental footprint while contributing to feeding a growing world population in a sustainable way. Our achievements will inspire others to do the same. Our efforts will focus on four elements:

- **INGREDIENTS**
  Creating a sustainable base for feed

- **OPERATIONS**
  Ensuring our own house is in order

- **NUTRITIONAL SOLUTIONS**
  Enabling the animal and the farmer to perform best

- **COMMITMENT**
  Involving people in the Feeding the Future challenge
VISION 2020
at a glance

**INGREDIENTS**
- Sustainable sourcing
- Sustainable partnerships
- Flexible formulations

Creating a sustainable base for feed

**OPERATIONS**
- Reducing environmental impact in our operations
- Feed-to-Food quality & safety
- Our working environment

Ensuring our own house is in order

**COMMITMENT**
- Employee engagement
- Stakeholder engagement
- Community development

Involving people in the Feeding the Future challenge

**NUTRITIONAL SOLUTIONS**
- Developing sustainable nutritional solutions
- Farm & Feed performance
- Animal & Human health

Enabling the animal and the farmer to perform best
**SUSTAINABLE SOURCING**
By 2020 we will have enabled our customers to purchase nutritional solutions with ingredients sourced through third party sustainably systems and promoted the use of those that are endorsed by our vendor policies.

**SUSTAINABLE PARTNERSHIPS**
Towards 2020 we will increase and strengthen our sustainable partnerships and supply chain projects.

**FLEXIBLE FORMULATIONS**
By 2020 we will have lowered the barriers for increased food production through further reducing our dependency on scarce ingredients.

**INGREDIENTS**

**COMMITMENT**

**OPERATIONS**

**REDUCING ENVIRONMENTAL IMPACT IN OUR OPERATIONS**
We will have halved the carbon footprint of our manufacturing plants in 2015 and of all our operations by 2020.

**FEED-TO-FOOD QUALITY & SAFETY**
By 2016 we will have implemented one standardised feed-to-food quality and safety approach world-wide based on the highest industry standards.

**OUR WORKING ENVIRONMENT**
By 2020 we will be at the top of our industry in employee satisfaction and labour market position.

**NUTRITIONAL SOLUTIONS**

**DEVELOPING SUSTAINABLE NUTRITIONAL SOLUTIONS**
By 2016 our new nutritional solutions will be assessed on their sustainability benefits as an integral part of their development. Towards 2020 sustainability will be fully integrated in our innovation processes leading to an increasing proportion of our portfolio having specific sustainability benefits.

**FARM & FEED PERFORMANCE**
Towards 2020 we will further enable farmers to improve their performance through predictive farm models and nutritional solutions that improve production efficiency and reduce emission levels.

**COMMUNITY DEVELOPMENT**
Towards 2020 we will enable more small farmers in our developing markets to raise their productivity by sharing our knowledge on basic agriculture and aquaculture.

**STAKEHOLDER ENGAGEMENT**
Towards 2020 we will strengthen our leadership in the multi-stakeholder debate and initiatives around the sustainability challenges of our industry.

**EMPLOYEE ENGAGEMENT**
By 2016 our employees will be actively committed to Nutreco’s contribution to the Feeding the Future challenge of feeding nine billion people in 2050 in a sustainable way.

**ANIMAL & HUMAN HEALTH**
Towards 2020 we will provide alternative technologies that improve animal health and performance and support our customers’ efforts to reduce antibiotic use.

**REDUCING ENVIRONMENTAL IMPACT IN OUR OPERATIONS**
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Sustainable sourcing

By 2020 we will have enabled our customers to purchase nutritional solutions with ingredients sourced through third party sustainably systems and promoted the use of those that are endorsed by our vendor policies.

Industry trends and challenges

- Pressure to reduce negative biodiversity impact and other environmental and social impacts of sourced ingredients.
- Sustainability initiatives addressing this challenge include the round tables on responsible soya (RTRS) and sustainable palm oil (RSPO) and the stewardship councils for marine products (MSC) and aquaculture (ASC).
- Consequences of sourcing through sustainability systems are becoming clearer. Strong preference to keep a level playing field while sourcing more sustainable.

Our approach

- New vendor policy and specific policies for soya, palm oil and marine products in place. Extending the number of specific vendor policies to other main categories.
- Extend supplier engagement activities, including the auditing of critical suppliers.
• Strengthen our involvement in existing supply chain and sector-wide initiatives to promote market demand for responsible ingredients, e.g. through chairing the RTRS and being member of the Supervisory Board of the ASC and through our commitment to the Dutch transition plan for responsible soy.
• Promote sourcing through those third party sustainability systems that are in line with our vendor policies. Actively communicate the sustainable alternatives available in the market to our customers.
• Ensure that our customers have the opportunity to include responsible ingredients in their feed formulations. Step-by-step strengthening of our procurement, nutritional solutions, manufacturing and logistics to respond proactively to evolving customer demands in the field of sustainable sourcing.

Measuring progress

Our success will be measured by:

• Results of our supplier engagement activities.
• Evolving customer demands in the field of sustainable sourcing and our ability to respond to those demands.

Critical milestones

2012
• Engagement with top 300 suppliers
• Develop specific vendor policy for services and other non-raw material items
• Finalise supplier audit plan, including prioritisation of suppliers

2013/2014
• Start developing specific vendor policies for grains and feed additives
• Global execution of supplier audits that include the sustainability elements of the vendor policy
• Evaluate progress and determine sustainable sourcing targets for 2020

2016 • Nutreco’s suppliers operate in compliance with vendor policies

2020 • Everything in place to enable our customers to purchase nutritional solutions with ingredients that are sourced sustainably through third party systems

On-going
• Assessment of third party sustainability systems based on our vendor policies

Nutreco chairs Round Table on Responsible Soy in 2011-2012

In June 2011, Nutreco’s Chief Procurement Officer, Jaap Oskam, was elected President of the Round Table on Responsible Soy (RTRS). The RTRS is a global multi-stakeholder platform that promote the responsible production of soya. Our Chief Procurement Officer shares his time between Nutreco and the RTRS. He assesses the proportion of soya that will be RTRS certified and the market demand. Producers need to be convinced there will be a long term demand for certified soya and a premium to cover the added costs. Europe is the leading market with strong demand from Belgium, the Netherlands, UK and Scandinavia. Nutreco and other feed producers in the Netherlands are committed to 100% sustainable soya in 2015, provided sufficient is available.
Sustainable partnerships

Towards 2020 we will increase and strengthen our sustainable partnerships and supply chain projects.

Industry trends and challenges

- Cooperation between value chain partners, business, government, knowledge centres and NGOs is essential to successfully address the sustainability challenges of our industry. The number and intensity of partnerships is expected to increase.
- The desire to assure business continuity, with predictable and secure demand and supply, increases cooperation between companies and their suppliers. Supply partnerships can boost innovation, sustainability and cost reduction.

Our approach

- Our suppliers will be classified in four segments (see diagram). Classification is based on two criteria: their financial/business impact and their importance for our business model. The latter is determined by innovative power, flexibility and sustainability.
- We will partner with our strategic and relevant development suppliers to develop and execute projects for a more sustainable supply chain.
- We will further support multi-stakeholder partnerships like the Aquaculture Stewardship Council (ASC) that promote the best environmental and social choice in seafood.
Nutreco partners with suppliers to optimize inbound logistics

In 2011 Nutreco executed a pilot project with two of its major logistics suppliers to investigate the possibilities of optimizing the inbound logistics of soya, palm oil and other main ingredients. The aim of the project was to identify a more efficient, flexible and predictable way of organising the inbound logistic with an intended cost saving of more than EUR 500,000 a year. The results of the project are very promising with a significant reduction potential for both the footprint and operational costs of warehouse facilities and logistic movements. The initiative will certainly be scaled up in the near future.

Measuring progress

Our success will be measured by:

- The intensity and success of our sustainable partnerships and projects

Critical milestones

2012  • Analyse supplier base and determine strategic and development suppliers
       • Select suppliers for sustainable supply chain projects and develop first plans
       • Start participation in IUCN-NL inspirational programme on ecosystems

2013  • First new sustainable supply chain projects and ecosystems projects running

2016  • Sustainable supply chain projects running with five strategic suppliers

2020  • Sustainable supply chain projects running with our selected strategic suppliers

Every year

- Evaluate supplier classification

Inspirational programme on ecosystems

Within the framework of the IUCN-NL Leaders for Nature network, Nutreco and ten other companies committed themselves to enter into a partnership to foster joint activities aimed at conserving and restoring ecosystems and biodiversity. Goal of this unique partnership is to contribute to an effective long term vision and strategy aimed at halting biodiversity loss and stimulating the restoration of ecosystems inside and outside the Netherlands. Participants will work on different kinds of projects, including the reduction of the initiators’ ecological footprints.
Flexible formulations

By 2020 we will have lowered the barriers for increased food production through further reducing our dependency on scarce ingredients.

Industry trends and challenges

- Broad recognition that availability of some essential ingredients is under potential pressure.
- Procurement and R&D departments are searching for sustainable alternatives for these kinds of ingredients.
- Several constraints and concerns – political, legislative, technical and societal – limit the use of alternative ingredients, for example animal proteins and genetically modified plants.

Our approach

- Company-wide quality assurance programme Nutrace® is used to guarantee maximum efficiency and feed-to-food quality and safety in all our feed formulations. In addition company-wide feed evaluation programs construct formulae of macro- and micro-ingredients to match nutritional specifications as closely as possible.
- Research programmes identify alternatives for scarce ingredients and ways to increase the valorisation and usage of co-products of the food industry in our formulations. Analysing long term trends relating to ingredients helps identifying those ingredients that may become scarce.
- The results of these analyses are translated into our procurement policy. New research programmes are continuously started to find new ways of reducing our dependency on scarce ingredients. Options include alternatives and more efficient use, for example through feed additives that improve functionality.
• Engagement with stakeholders to eliminate current constraints and concerns, supported by clear Nutreco position papers.

Measuring progress

Our success will be measured by:

• The success of research programmes aimed at reducing our dependence on scarce ingredients
• The diminishing of constraints and concerns relating to alternative ingredients linked to Nutreco’s stakeholder engagement activities

Critical milestones

2012 • Strategic analysis of long term ingredient trends
• Develop short list of ingredients for research programmes and/or engagement activities and define improvement targets for these ingredients

2013 • Development of position papers for certain ingredients to support engagement activities

2016 • Review first results of strategic research programmes
• Redefine research programmes based on evaluation and redefine short list of ingredients

MicroBalance™ reduces dependency on fish meal

Kg fish protein used in feed versus kg fish protein produced

The MicroBalance™ concept extends formulation flexibility in fish feeds. Fish feeds can be produced with much lower levels of fishmeal without compromising product performance or quality. By adding essential micro-nutrients from alternative sources separately to the feed, we were able to almost halve the level of fishmeal from previous typical levels of 25–30%. Feeds formulated using MicroBalance™ were introduced by Skretting companies in 2010 and have met with positive responses in markets as far apart as Norway and Australia.
Reducing the environmental impact of our operations

We will have halved the carbon footprint of our manufacturing plants in 2015 and of all our operations by 2020.

Industry trends and challenges

• Only a small percentage of greenhouse gas emissions from livestock activities are generated by feed companies. Even so, companies are looking to decrease the environmental impact of their own operations besides – the often more important – contribution they can make in other parts of the value chain.

• The carbon footprint of a company is often used as an indicator of environmental impact. Getting employees engaged however requires more direct objectives such as reducing energy and improving transport efficiency.

• Reduction measures are often complemented by sustainable sourcing of energy, including footprint compensation, especially in Europe. The question is whether companies will continue this when the costs increase as expected.

Greenhouse gas emissions (GHG) from livestock activities —

18% of total anthropogenic (from human activity) GHG emissions are from livestock activities. 13% are from EXTENSIVE livestock production systems (e.g. grazing cattle, sheep and goats). 5% are from INTENSIVE livestock production systems (e.g. pork, poultry and dairy production).

Crop cultivation: circa 56%
Transport: 0.05%
Industrial processing: 0.5-24%
Animal production: circa 42%

Contribution of various parts of the production chain

* Contribution to total greenhouse gas emissions from intensive livestock production systems, including deforestation.
Our approach

- Nutreco’s Energy Policy aims to reduce the carbon footprint of Nutreco manufacturing operations by 50% in 2015, compared with a 2009 baseline.
- Our plants conducted an energy assessment and are implementing a reduction plan. Progress is monitored using a central manufacturing database.
- From 2011 our power supply worldwide is carbon neutral.
- Logistics and travel form the second important part of our carbon footprint. We will follow the same strategy with them as we did with for our manufacturing activities: assess, plan, implement reduction measures and monitor progress. At corporate level we will green our lease car and travel policy and work to reduce and compensate our air travel.
- Other environmental themes like waste management, water management, land use and Green IT will be addressed in line with the carbon footprint reduction initiatives.

Measuring progress

Our success will be measured by:

- The reduction in the carbon footprint of our manufacturing activities, logistics and travel
- The number of employees fully engaged with the topic and taking initiatives to make improvements

Critical milestones

2012 • Full implementation of local energy reduction plans
- Assess carbon footprint of logistics and travel and organise improvement and develop local improvement plans
- Develop new corporate travel and lease car policy

2013 • Implement local improvement plans for logistics and travel
- Begin implementing corporate travel and lease car policy

2015 • 50% carbon footprint reduction at manufacturing plants (baseline 2009)
- Review and update of carbon reduction strategy

2020 • 50% carbon footprint reduction of all operations
- Our international meetings and air travel are carbon neutral
- Carbon footprint of our product delivery logistics is reduced by 20% per tonne delivered
- Carbon footprint of our company cars is reduced by 20% per km driven

Sloten significantly cuts carbon footprint

Sloten, a Dutch operating company of Nutreco, purchases by-products from cheese production and spray dries them to produce milk replacers for young animals. Following an energy assessment, Sloten upgraded its spray drying plant to be more energy efficient. The gain in energy efficiency will cut the carbon footprint per ton by around 30%, which represents more than 5,000 tonnes of CO₂. The upgrade also reduced environmental impact, raised product quality and increased operational efficiency. Further environmental benefits come from new filters and a heat recovery system.
Feed-to-Food quality & safety

By 2016 we will have implemented one standardised feed-to-food quality and safety approach world-wide based on the highest industry standards.

Industry trends and challenges

• A precondition in developed markets, feed-to-food quality and safety is rising fast on the priority ladder in other regions due to local demands and for exports.
• Food safety is an important risk in our industry. It affects animal and human health. An incident can damage finances and reputation. The many links in the value chain make controlling this risk complex. Companies therefore build professional systems to mitigate risks and react promptly to any incidents.
• Industry standards and legislation are developing rapidly worldwide.
• Consolidation of suppliers and animal feed companies leads to more stable relationships and greater transparency between them, which benefits feed-to-food quality assurance.

Our approach

• The quality and safety of our products is managed through our Nutrace® feed-to-food quality and safety programme. It has five standards and protocols that are applied across all Nutreco businesses. The development of Nutrace® is guided by a platform of quality assurance and food safety specialists.
• The Nutrace® platform established key performance indicators and a dashboard to monitor the performance of Nutreco operating companies against all five standards. A self-assessment tool and internal audits help operating companies assess their compliance with Nutrace®. Newly acquired companies are expected to comply within two years.
• Started in 2009, Nutreco’s Unite programme is optimizing and harmonizing key processes for Procurement, Supply Chain Management, Finance and Sales throughout Nutreco. Nutrace® is being integrated in the Unite programme. This will facilitate the consistent implementation of Nutrace® globally, with limited regional adjustments.
It will lead to standardised ingredient specifications, risk assessments and supplier audits and a list of approved ingredients and suppliers.

- The centralisation and professionalisation of Nutreco laboratories complements the Nutrace® and the Unite programmes. One objective is to develop better techniques for assessing the quality of ingredients.

Critical milestones

2012 • Execution of self-assessments based on renewed Nutrace® standards
• Start implementation phase Nutrace®-Unite, with emphasis on procurement-related quality processes
• Create a standardised document management system to share best practices

2013 • Continue implementation phase Nutrace®-Unite
• Further research in techniques to better assess the quality of ingredients

2014 • Nutrace®-Unite processes operational
• Renewed steering and monitoring system based on indicators

2016 • Worldwide compliance with highest industry standards

Measuring progress

Our success will be measured by:

- Implementation level of Unite including the extent of Nutrace® integration
- Performance on selected indicators, e.g. compliance with Nutrace® standards, number of incidents, review of ingredient and final feed monitoring data, status of risk assessments and audit results

Nutrace® assures feed-to-food quality and safety

Nutrace® is Nutreco’s company-wide proactive programme to assure feed-to-food quality and safety. Nutrace® safeguards the quality of Nutreco products and services. The programme, complying with legislation and customer demands, is structured in five standards:

1. **Certified Quality & Food Safety**: e.g. based on internal HACCP/HSEQ systems and external certifications such as ISO, GMP and BRC; welcoming customers to check operations and certificates

2. **Ingredient & Supplier Assessment and Management**: e.g. only using approved feed ingredients and suppliers based on common risk assessment standards

3. **Monitoring & Control**: e.g. harmonised sampling & analysis methods and a Nutreco-wide early warning and rapid alert system

4. **Risk Management**: e.g. issue and crisis management system to minimise risks and their impacts, supported by a global network of industry stakeholders

5. **Tracking & Tracing**: e.g. keeping records of every input and process from feed ingredient purchasing to finished product delivery
Our working environment

By 2020 we will be at the top of our industry in employee satisfaction and labour market position.

Industry trends and challenges

- There is a quest for talent and talent development, especially technical, as the pressure grows on agriculture to contribute to feeding nine billion people in 2050.
- Employees, governments, investors and NGOs demand higher standards from employers in working conditions, opportunities for development, human rights and social responsibility. Companies must excel to be an employer of choice.
- Opportunities for companies to benchmark and market their efforts in human resource management have grown. Examples include employer of choice competitions and certified management systems (e.g. SA8000).

Our approach

- Our HR team defines, recruits and works to retain the people needed to fulfil Nutreco’s strategy, including our sustainability ambitions. The HR team and strategy will evolve in line with this objective.
- Consideration of local minimum employment standards, e.g. compensation and benefits, working conditions and human rights, with a special focus on our growth markets.
- Harmonisation and optimisation of our employee surveys, including the integration of sustainability questions. We will compare survey results across the organisation as well as HR data such as diversity, health and safety.
- Maintain the low injury frequency within our workforce. Structured approach to further improve
our workers’ safety performance (assess current situation, build local improvement plans, implement measures and monitor progress).

• Selection of initiatives for comparing our labour market position with those of our peers. In the future our companies should participate in the selected initiatives.
• Our companies must prepare and implement plans to improve the outcome of employee surveys and of internal and external assessments.

Measuring progress

Our success will be measured by:

• The alignment of our HR strategy and organisation with our business ambition ‘driving sustainable growth’ and our sustainability ambitions, especially in the field of employee satisfaction and labour market position
• Results of employee surveys and labour market position surveys

Critical milestones

2012 • Consideration of local minimum employment standards (e.g. labour conditions, human rights)
• Develop and conduct a global employee survey and start benchmarking selected HR KPIs
• Select schemes for comparing our labour market position with that of our peers

2013 • Start comparing labour market position with peers for selected companies

2016 • Companies are participating in global labour market positioning
• Companies have an improvement plan to progress towards being a top company for employee satisfaction and labour market position

2020 • Reduce Lost Time Injury Frequency by 50%
(baseline 2010)

Top labour market position Nutreco España

With approximately 3,500 employees the Nutreco España Group is responsible for over one-third of our total workforce. In 2000 Nutreco España was far from the top in the “best companies to work for in Spain”. But the company introduced ambitious HR plans and managed to reach a number 10 position in 2009. Numerous actions improved the quality of life for employees, including social benefits and policies regarding equality and diversity. In January 2009 Nutreco España was the first company in our sector worldwide to obtain the Social Accountability 8000 Certificate. SA8000 is a management tool and international standard for the permanent improvement of labour conditions, based on the International Human Rights Conventions, the International Labour Organization, etc. In July 2011, Nutreco España and the two largest trade unions in Spain agreed an Equality Plan for the entire group. As a result of all these actions, the Group’s companies have received several institutional acknowledgements and awards.
Developing sustainable nutritional solutions

By 2016 our new nutritional solutions will be assessed on their sustainability benefits as an integral part of their development. Towards 2020 sustainability will be fully integrated in our innovation processes leading to an increasing proportion of our portfolio having specific sustainability benefits.

Industry trends and challenges

• Stakeholders in the food chain are increasingly asking for clear evidence that products are safe, healthy and improve performance without increasing the burden on natural resources.
• Attention to indicators such as feed efficiency, carbon footprint, acidification and eutrophication is growing. New sustainability criteria are being developed. Meanwhile the industry attempts to identify globally accepted standards and tools to calculate the environmental and social impact of products.

Our approach

• Integration of sustainability in our innovation processes, from idea to post-launch evaluation. Elements include:
  - Expected sustainability level of the innovation scored during idea screening.
  - Sustainability checklist for innovations used at the idea screening, feasibility and development phases.
  - Preparation of a short assessment report, answering eight key questions and supported by quantitative data and other evidence that validates sustainability claims.
• To ensure sustainability is permanently integrated in the innovation process, it will become part of our quality management systems.
• Development of tools and models to generate data and measure our performance. We are active in several industry initiatives to create global standards and tools to measure the environmental and social impact of products.
• Recently established regional Application and Solutions Centres to improve our ability to bring innovations efficiently to market.
Measuring progress

Our success will be measured by:

- The extent to which we can quantify the sustainability of our innovations
- The number of sustainability assessments made for new or significantly renewed products and concepts and the results of audits of our innovation processes and the integration of sustainability therein
- The extent to which sustainability assessments are translated into marketing messages and the extent to which these lead to new or increased business

Critical milestones

2012 • Finalise sustainability checklist and measurement system for sustainability indicators
• Further integration of sustainability assessment in innovation processes and management systems
• First set of internal sustainability assessment reports for innovations

2013 • Audit the innovation process including the integration of sustainability

2016 • Assessment reports for new (or significantly renewed) nutritional solutions

Every two years
• Evaluate and adjust sustainability indicators and targets in innovation process

New innovative gut health product: Presan™

Launched in 2012, Presan™ delivers an integrated approach which optimises microbial flora and boosts gut wall integrity. This approach is a powerful formula designed to raise profit by decreasing wet litter and improving the birds’ technical performance. Furthermore, Presan is not only a viable alternative to antimicrobial growth promoters, but also reduces the use of antibiotics.

Presan™ was the first innovation to have its sustainability aspects analysed using our new assessment method. An extract of the preliminary assessment – answering the eight defined sustainability questions - is shown on the right:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingredients supplied responsibly?</td>
<td>Yes</td>
<td>No specific issues. Current suppliers are being engaged on our vendor policies by Nutreco Procurement.</td>
</tr>
<tr>
<td>Solution produced responsible?</td>
<td>Yes</td>
<td>Full compliance. Tailor made solution needed for North America because of more stringent regulation for specific compound. No specific issues regarding HSE and animal testing.</td>
</tr>
<tr>
<td>Sustainable Return on Investment (ROI)?</td>
<td>Yes</td>
<td>Sound ROI expected for both Nutreco and customer. Unique combination of ingredients making it hard to copy. Excellent fit with business and science strategy.</td>
</tr>
<tr>
<td>Improves animal performance / feed-to-food production efficiency?</td>
<td>Yes</td>
<td>Improvement of feed-to-food production efficiency by a few percent.</td>
</tr>
<tr>
<td>Reduced use of scarce raw materials?</td>
<td>No</td>
<td>N.A.</td>
</tr>
<tr>
<td>Helps to conserve biodiversity?</td>
<td>Yes</td>
<td>Positive effects to be expected on carbon footprint, acidification and eutrophication potential. Needs to be validated.</td>
</tr>
<tr>
<td>Improves animal health and welfare?</td>
<td>Yes</td>
<td>In pigs 35% less diarrhoea incidence. In broilers 10% reduction in litter moisture. Through reduced litter moisture possible positive effects on foot pad lesions in broilers.</td>
</tr>
<tr>
<td>Improves human health, safety and well-being?</td>
<td>Yes</td>
<td>Strong indication that Presan helps reduce use of antibiotics.</td>
</tr>
</tbody>
</table>
Towards 2020 we will further enable farmers to improve their performance through predictive farm models and nutritional solutions that improve production efficiency and reduce emission levels.

Industry trends and challenges

- In recent decades output of meat, fish, milk and eggs increased significantly through higher productivity of animals and better feed conversion. Animal production became more sustainable through a reduction of P, N and ammonia emissions by over 50% in developed markets. However, there still is great variation in performance and feed digestibility among animals, farms and regions.
- Our industry has always worked to improve farm performance. Recently, improving environmental indicators has become important, although not yet fully valued economical.

Our approach

- Improving farm and feed performance is linked to the quantitative nutrition approach of Nutreco’s science strategy (see illustration).
- Nutreco has predictive nutritional farm models for dairy, swine, salmon and trout. Models for other major farmed fish species, beef and broilers will also become available.

We will integrate sustainability indicators such as carbon footprint in our models.

- Continuation of improving livestock and fish production efficiency, working with our value chain partners to reduce the ratio of input versus output (meat, fish, milk and eggs).
Enabling farmers to significantly reduce the emissions of phosphates, nitrogen, trace minerals and methane by their animals; proactively anticipating expected legal constraints and economic valuations of the emissions. We will set reduction targets and monitor progress using our predictive farm models.

Adapting our models and other solutions to geographical conditions to ensure improved efficiency and sustainability based on locally available raw materials, climate, husbandry systems, genetics and legislation.

Critical milestones

2012
- Finalise first selection of sustainability indicators to be integrated in our farm models
- Start integrating nitrogen and phosphorus emissions in our farm models for salmon and trout
- Start further integrating of sustainability indicators in our farm models for ruminants and swine
- Develop reduction targets for selected animals’ emissions

2013
- Further develop sustainability indicators in our farm models for fish and expand number of species for which models are available
- Start assessing animals’ emissions through our farm models

2014
- Finalise farm models for poultry and beef

2015
- Integrate first set of sustainability indicators in our farm models for poultry and beef

Every 2 years
- Evaluate farm models and the sustainability indicators integrated in them

Measuring progress

Our success will be measured by:

- The availability, quality and usage of our nutritional farm models
- The improvement in feed efficiency on the farms
- The reduction of emission levels achieved through our nutritional solutions

Predictive models available for farmers

Nutreco has several predictive models available for optimising farm performance. Two of them are Watson and Newton.

Watson is an integrated swine growth model used as a decision making tool to optimise farm economics. It takes into account the genotypic potential of the specific farm and the impacts of the animal’s environment. It allows an optimisation based on Average Daily Gain, Feed Conversion, Margin Over Feed, Cost/kg Gain, Net Profit, Nitrogen and Phosphorus Excretion.

Newton is a ruminant rationing model to match the feed offered to ruminants with their specific nutrient requirements to optimise health and efficiency of production. It assesses the energy content of the forages and accurately determines the most economic ration to be used. Newton includes a feed additive module that evaluates the advantages of using such ingredients.
Animal & Human health

Towards 2020 we will provide alternative technologies that improve animal health and performance and support our customers’ efforts to reduce antibiotic use.

Industry trends and challenges

- Animal health issues currently attracting attention of the industry are related to transition periods, for example milk fever in dairy cows and post-weaning diarrhoea in piglets, and other intestinal disorders in pigs and poultry. New animal and human health challenges will continue to appear.
- Globally, antibiotics are used in animal production for disease treatment, disease prevention and growth promotion, depending on animal health status and legislation. Bacteria that develop resistance to antibiotics are a potential threat to animal and human health. Prudent use of antibiotics is an important factor in the control of such resistance.
- New reduction strategies for the use of antibiotics at farm level were recently introduced in some EU countries. Our industry supports prudent use of antibiotics to minimise the potential for antibiotic resistance development while respecting the health and welfare of animals.

Our approach

- Our animal and human health ambitions are linked to the functional nutrition approach of Nutreco’s science strategy (see illustration page 22). We have expert platforms, new technologies, specific research programmes, new feed additives and other nutritional solutions in place and under development to address current and future challenges.
- Special attention is given to critical periods in animal’s life, such as transition phases, e.g. weaning. We believe that these periods have great impact on animal performance, as one of our concepts states: ‘Life start sets Life performance’. We invest in research projects aimed at further understanding and improving health outcomes during these periods.
- Healthier animals are more productive and need fewer antibiotics. Our primary focus therefore is to develop nutritional solutions that further improve animal health, especially gut health. We invest heavily in research programmes to advance our understanding of gut disease and develop technologies that are highly efficient on farm.
Many programmes are conducted with universities and other agricultural and medical knowledge centres worldwide. Solutions may include improved feed formulations, better farm management and functional ingredients that reduce the need for antibiotics.

Measuring progress

Our success will be measured by:

- Number and success of nutritional solutions and research projects that focus on improvements of human and animal health, with a special focus on the critical periods in the animals’ life

Critical milestones

2012 • Establish research programmes according to 3–5 years plans

2013-2020

• Launch of new nutritional solutions

Protec keeps fish healthy

Protec is one of Skretting’s functional feeds. Protec helps to keep the fish healthy through support of the immune system, strengthen gut health, stabilize the intestinal microflora and increase the fish’s anti-oxidative capacity. Our understanding of functional ingredients helped us make substantial progress in fish nutrition and in the supply of feeds that deliver both performance and health benefits. Continuing exploration of functional nutrition will also enable us to contribute to the sustainable expansion of aquaculture.

Several innovation awards for CalFix

Trouw Nutrition International launched CalFix, a dietetic compound feed formulated to reduce the risk of (sub) clinical milk fever in dairy cows. CalFix contains a calcium binder that prepares the cow’s metabolism for the low blood calcium levels associated with the early stages of milk production. It can reduce incidence rates of (sub) clinical milk fever and the costs incurred by the producer by up to 50%. Distinct from similar products on the market, it has no negative effect on feed intake and presents no application problems. The patented technology attracted several innovation awards.
By 2016 our employees will be actively committed to Nutreco’s contribution to the Feeding the Future challenge of feeding nine billion people in 2050 in a sustainable way.

Industry trends and challenges

- Employee engagement is seen as a critical factor for achieving sustainability ambitions as it is for other organisational change and development processes.
- Broad awareness that informing people is only a first step in engaging and inspiring employees to take the necessary actions. It takes a combination of top-down and bottom-up approaches with sustainability champions at all levels to get sustainability into the culture of a company.

Our approach

- Internal communication tools such as employee magazines and management newsletters are used to share information about the sustainability challenges of our industry and how we are addressing them. Recently we added a sustainability portal on the intranet. We also raise awareness and engagement through management sessions around the world to discuss global sustainability challenges and develop local sustainability action plans.
Further steps to promote engagement will be taken. After determining the level of sustainability awareness in Nutreco, we will set targets for knowledge, attitude and behaviour. We want our employees to be fully involved in the development and execution of sustainability plans and actions. An Internal Engagement Plan will facilitate progress.

Measuring progress

Our success will be measured by:

- The level of sustainability awareness and engagement
- Assessing the internal engagement activities stated in the sustainability action plans
- Number of ‘sustainability champions’ in the organisation

Critical milestones

2012 • Inform and engage employees on the Nutreco Sustainability Vision 2020
• System for measuring internal sustainability awareness and engagement in place; define desired level of awareness and engagement
• Develop and roll-out internal sustainability communication and engagement approach (Internal Engagement Plan)

2014 • Include sustainability awareness and engagement in regular Planning and Control cycles
• Integrate sustainability further in the recruitment, appraisal and reward systems
• Our employees believe Nutreco’s sustainability vision towards 2020 make sense and want to contribute

2016 • Our employees are actively committed to the Feeding the Future challenge

Sustainability tree to increase engagement

In 2010 twenty-five local sustainability action plans were developed. Together they covered our whole global organisation. It was a new start in engaging our people and in structuring our sustainability approach.

To raise awareness of its plan, Trouw Nutrition Mexico made a metal tree for each of its three plants. The employees see the trees every day as they enter work. Started as a trunk with bare branches, each time a company achieves a sustainability objective a leaf is added. Eventually the trees will be covered in leaves. Employees are invited to share their sustainability ideas in a contest. In the first year it already delivered 30 new ideas.
Stakeholder engagement

Towards 2020 we will strengthen our leadership in multi-stakeholder debates and initiatives around the sustainability challenges of our industry.

Industry trends and challenges

• The increasing level of cooperation and partnerships within the value chain is a logical consequence of the increased degree of stakeholder engagement initiatives that takes place all over the world.
• The increased level of stakeholder engagement and cooperation has side effects. There is a proliferation of multi-stakeholder engagement initiatives, many addressing the same issues. The challenge is to harmonise and connect the initiatives to find synergies that deliver the biggest impact.

Our approach

• Organisation of Agri Vision and AquaVision conferences to engage with a broad international spectrum of stakeholders to discuss the sustainability challenges of our industry. Ensure that the quality of the conferences and their participants remains at the current high level.
• To optimise our participation in other engagement initiatives, we will implement a global issue management and stakeholder engagement strategy based on four steps:
  1. **Identify** key sustainability issues and list related engagement initiatives
  2. Ensure a continuous *information* flow on these issues
  3. Determine the issues we want to *influence* and how
  4. **Organise** issue management to ensure we continue to take these steps. Instruments for this strategy include installing a centre of expertise, aligning with risk management and conducting risk analyses and regular audits.
• Strengthening our visibility in the public sustainability debate and disseminate position papers to explain our position on important sustainability issues.
• Conducting a reputation survey and a specific stakeholder dialogue every three years to assess our progress in showing leadership in addressing the sustainability challenges of our industry.
Measuring progress

Our success will be measured by:

- Evaluation of stakeholder conferences Agri Vision and AquaVision
- The quality of the issue management organisation
- Results of reputation surveys and specific stakeholder dialogues

Critical milestones

2012 • Finalise issue management and stakeholder engagement strategy

2013 • Establish a global issue management organisation

Every year

• Organise Agri Vision or AquaVision

Multi-stakeholder conferences inform and inspire

Since 1996, Nutreco organises multi-stakeholder AquaVision and Agri Vision business conferences to discuss the challenges of our industry. Identifying the sustainability issues confronting the industry is an important aspect of the organisation process. The conferences offer two days of informative and provocative presentations interspersed with networking events. Attended by almost 400 leaders of major agri and aqua business companies, academics, consultants and NGOs from more than 30 countries world-wide, each conference provides delegates with ideas, information and inspiration and give Nutreco input for our strategy development.
Community development

Towards 2020 we will enable more small farmers in our developing markets to raise their productivity by sharing our knowledge on basic agriculture and aquaculture.

Industry trends and challenges

• Community development has become an integral part of responsible business. Companies are aware of challenges such as poor living standards in certain regions, and invest in their development. Partly due to the global economic crisis, companies make more conscious choices about where and how to invest.

• Next to financial support companies increasingly enable employees to invest time and knowledge in projects. Transferring knowledge gives projects more potential to become self-sustaining. A current trend is the increasing level of cooperation between different parties in such community development projects.

Our approach

• We will build a Community Development Strategy with clear criteria for when and how to invest in knowledge sharing projects to raise small farmers’ productivity. It will define the most effective way of investing in chosen
communities. Obvious criteria include alignment with our business, contribution to the Feeding the Future challenge, improvement of living standards, potential for knowledge transfer and project reproducibility. We will select community development projects and set a target for the number of small farmers that should benefit from our programme.

- The Community Development Strategy will also refine our ambition to be actively involved in our local communities, building on many examples already present in Nutreco. Each operating company is expected to be involved in its local community.

Measuring progress

Our success will be measured by:

- The number of farmers in developing countries benefitting from our community development projects
- The level of involvement of our operating companies in the local communities in which they operate

Critical milestones

2012  • Develop Community Development Strategy  
      • Redefine expectations of local community involvement for our operating companies

2013  • Determine new community developments projects in developing countries in line with the new strategy and criteria

2016  • 5,000 farmers are enabled to raise their productivity

Community development in Bangladesh

In 2009 we started our first major community development project in Bangladesh. The focus of the project is to stimulate rural development by supporting basic agriculture and pond aquaculture. Participants receive micro-finance loans and training in keeping poultry, growing vegetables or pond aquaculture. At the end of 2011 more than 3,000 households were already involved, directly benefitting families and many more people indirectly. For example aquaculture provides nutrition for a family and revenues up to EUR 200 a year. The average wage in the region is EUR 1 a day.