

# CSR Report 2016

May 30th, 2017





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# CSR Report 2016

The CSR Report is published yearly and concerns all companies of the Royal Agrifirm Group, unless indicated otherwise for specific components. The previous report was published in May 2016.

The guideline used in preparing the report is the Global Reporting Initiative (GRI), the international guideline for sustainability reporting. This report was prepared in accordance with the GRI G4 Guideline. The GRI Table with references to all reported information is available on our website [www.agrifirm.com](http://www.agrifirm.com) under the header ‘About Us/Agrifirm in the Netherlands/Annual Reports’.

For additional information about Agrifirm’s Corporate Social Responsibility policy (CSR Policy), contact Ruud Tijssens, Director Corporate Affairs, Strategic R&D and CSR, [r.tijssens@agrifirm.com](mailto:r.tijssens@agrifirm.com), or **T** +31 (0)88 488 10 00.

# Reading Guide

In this Corporate Social Responsibility Report, Agrifirm reports on its CSR policy and the accomplishments realised in this domain.

Section 1 sets out Agrifirm’s mission, corporate principles and ambitions. It provides an overview of the main events within the Agrifirm Group.

Section 2 describes Agrifirm’s Corporate Social Responsibility policy, including the objectives set for the six pillars, and a visualisation of Agrifirm’s value chain. This section also covers the results of the materiality analysis.

Sections 3 through 8 focus on the objectives and key performance of the six Corporate Social Responsibility policy pillars. For each pillar, a responsible Agrifirm officer or an external partner highlights an example with high sustainability impact.

The Appendices list Agrifirm’s Key Performance Indicators (KPIs) relating to the organisation, the environment, terms and conditions of employment and human rights. Agrifirm adheres to the GRI G4 reporting guidelines.





# Preface

This is my first corporate sustainability report as CEO of Agrifirm. In the brief period that I have been working for this wonderful company, I am repeatedly struck by how close this Cooperative is to its members. Agricultural entrepreneurs are our most important customers. They fulfil an important role in the food production chain and Agrifirm, together with them, stands at the centre of the social debates about healthy and sustainably produced food.

These debates concern relevant topics such as the wellbeing of humans and animals, the greening of crop protection agents and, for example, cooperation to conceive good solutions to the manure issue. It is of extreme importance that the agricultural food sector, together with chain partners, as well as retailers and NGOs, participates in

the social debate in all openness. By telling its own story, listening to what society is demanding and by developing solutions in partnership.

Take crop protection, for example; no one better than livestock farmers and growers is aware of the importance of reducing the environmental impact and the greening of resources. The sector has already made great strides in this area; for example through means of precision agriculture. We will continue to pursue this innovation. Another example is the Goed Nest Kip, a new animal-friendly chicken concept developed in cooperation with retailers and NGOs. Not yet sufficiently sustainable, yet a step in the right direction in terms of producing on the basis of corporate social responsibility. Make CSR a positive topic of conversation. Chain cooperation al-

one offers realistic and sustainable answers to justifiable social issues.

In 2016, the economic climate in various international regions was challenging. Agrifirm makes every effort to support agricultural entrepreneurs in difficult economic times. What also made 2016 an eventful year is the low milk prices, the long-term low pig meat prices that fortunately are showing some sign of recovery, the exceptional weather conditions, the bird flu and – in particular for Dutch dairy farmers – the phosphate issue.

Every agricultural entrepreneur produces a level of phosphate that depends on the efficiency of farming operations and product quality. In 2016, the sum total of all phosphate emissions was too high. The chain must address this issue by means of

a coordinated phosphate policy. In addition, we are supporting entrepreneurs with solutions based on our combined knowledge of arable farming, grasslands and livestock farming. For example, by reducing the calving age by two months, developing extra low phosphate feed and making greater use of roughage crops with a higher dry matter yield and better nutritional value.

Sustaining positive social influence is only possible when you are in good financial health. In 2016, Agrifirm achieved a satisfactory result in turbulent markets. To continue to be able to do that we must further strengthen ourselves as a company. Greater cooperation among divisions, for example, and staying focused in all positions; how do we ensure that each day we become just a bit more professional?

Anywhere in the world Agrifirm operates we focus on knowledge and advice, and demonstrate that CSR is an integral part of our operations. Our nutritionists and product developers meet several times each year in knowledge platforms to discuss the challenges faced by our customers and to conceive of solutions. I will join my colleague Board members at two of these meetings. We will then decide on the solutions we will be focusing on. What we consider corporate social responsible solutions will increasingly carry weight in our decision-making. We would like to provide greater insight into this for ourselves, as well as others; how do we actually measure and establish this? That is the core of our global CSR Policy and the specific implementation of our vision of helping secure a sustainable food chain for future generations.



**Dick Hordijk**  
Chairman Executive Board  
Royal Agrifirm Group



# 1. Agrifirm, a Link to Success

*Koninklijke Coöperatie Agrifirm U.A. combines the strength of approximately 17,000 Dutch farmers in the agricultural and horticultural sectors. This way we achieve the maximum possible buying power with regard to high quality products such as animal feeds, sowing seeds, fertilisers and crop protection agents for our members. In addition, it gives us the strength needed to invest in knowledge and innovation, which we translate into practical solutions at the farm. This way we contribute to successfully growing crops and keeping animals.*

Agrifirm is a market leader in the Netherlands and is globally engaged in the production and supply of products and services for feeding animals and cultivating crops.

## Mission

Agrifirm is an agricultural cooperative that operates globally, with members in the Netherlands only. Our mission is 'to provide measurable, relevant and sustainable value at the farm and field level, and to the animal feed industry'. We do this by providing sustainable and profitable products and concepts that enable livestock farmers and growers to achieve the best possible results. The increase in the value of our enterprise is returned to our members through Cooperative profit distribution (Member Dividend and Member Discount). We work intensively together with members, customers and involved chain parties, and share knowledge within the Agrifirm divisions and clusters.

## Vision

'A sustainable food chain for future generations' is our vision. This vision

determines why Agrifirm exists as an organisation, and directs the strategic and everyday choices.

## Ambition

Agrifirm aims to further strengthen its leading market position in the Netherlands by being a front runner in terms of knowledge and innovation, and through customer-oriented consulting services. We want to expand our market share within the Netherlands, as well as beyond, through organic growth and profitable acquisitions. This why Agrifirm works with well-trained employees who are sincerely interested in their customers.

## Organisation Chart

The Royal Agrifirm Group comprises fifteen international companies, has over 17,000 members and approximately 3,400 employees. The companies are grouped into three divisions and three clusters.

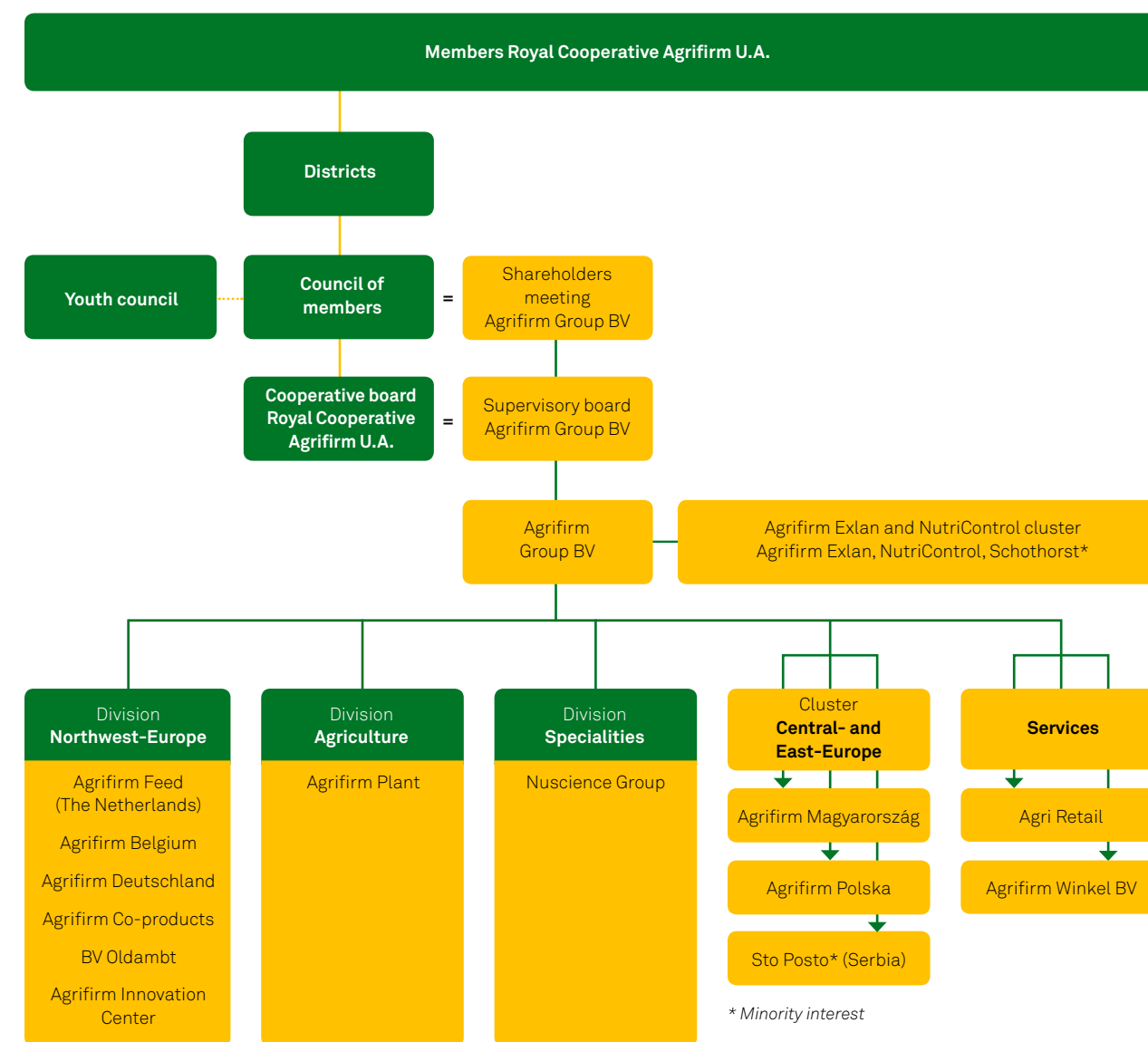
- North-West Europe Division: production and sales volume of animal feeds, wet feeds and artificially dried fodder legumes and straw products; consultan-

cy and research.

- Plant Division: production and sales volume of sowing seeds, fertilisers, crop protection agents; sale of cereals, onions and carrots, and operating materials; consultancy and research.
- Specialties Division: production of premixes, mineral mixes, protein-rich raw materials and nutritional concepts for animal feeds.
- Central and Eastern Europe Cluster: Agrifirm's feed activities in Hungary, Poland and Serbia.
- Service Companies Cluster: sale of agricultural consumer products.
- Agrifirm Exlan and NutriControl cluster

## Executive Board and Supervisory Board

Agrifirm's Executive Board consists of the Chairman (CEO) and the Financial Director (CFO). The Executive Board is responsible for the strategy, policy and operating activities. The Supervisory Board appoints the members of the Executive Board, supervises its



Organisation Chart as of 31 December 2016

performance and has the authority to approve certain decisions of the Executive Board – as described in the Articles of Association.

## Codes of Conduct and Conventions

The Executive Board and the Supervisory Board are responsible for the corporate governance structure and compliance with the Corporate Gover-

nance Code (the Frijns Code). Agrifirm voluntarily abides by the Netherlands Corporate Governance Code, but deviates from the Corporate Governance Code in five areas, including the decision to not publish the remuneration and other contractual agreements of individual members of the Executive Board (see Annual Financial Report 2016 for additional details).

Agrifirm aims to at least implement the minimum social security standards, whereby the International Labour Conditions (ILO Conventions) are leading. Nine ILO Conventions apply within our own companies and are leading in discussions with our suppliers. Agrifirm endorses the right to organise, equal opportunity and treatment (equal remuneration and



no discrimination) conventions. There is no compulsory and child labour in the Agrifirm companies. We feel responsible for maintaining these ILO conventions in the Agrifirm companies and monitor the enforcement of these conventions in our supplying companies. Agrifirm pursues an active safety policy on the work floor. For example, in 2016 Agrifirm initiated a new approach designed to improve the safety of anyone entering the premises by using reflective jackets and by making safety gloves mandatory.

#### Risk Management

Agrifirm operates on various markets in various countries. We as much as possible limit the risks associated with our activities at a strategic, operational, financial and compliance level. Additional information about Agrifirm's risk management approach is available in the Annual Financial Report 2016.

#### Acquisitions

Agrifirm's 2014-2016 Strategic Plan

includes a stronger focus on core activities and an acceleration of improvement processes. The sale of the remaining shares in Agrimec (Abemec) to BayWa and the sale of the last shares in Plukon contributed to creating this stronger focus. The retail formulas (Welkoop Winkel BV and Welkoop Retail) currently are the only remaining non-core activities.

Agrifirm is expanding its market share in Latin America with the purchase of the Uruguayan company Solopa S.A. (commercial name: Nutral), a market leader in premixes and other nutritional products for dairy and beef cattle. The acquisition of Paszmark combined with the spread of the other three Agrifirm Polish compound feed companies is an important step towards achieving full national coverage of the Polish market. The new Nuscience office in Singapore constitutes the Group's operating base for the Asian region, excluding China which is covered by Nuscience's Chinese branches.

#### Innovative Customer Panel

Agrifirm's customers traditionally are more focused on new developments relating to the product range, innovations and services. To simplify this, Agrifirm initiated the online customer panel AgriOpinion in 2016. AgriOpinion supplements the consultations held by means of the member meetings. Agrifirm more directly involves customers in product development and service improvement through means of this panel.

#### Dutch Farming

Since 2015, Agrifirm has been conducting a PR campaign under the motto 'Dutch Farming'. With the stories of leading livestock farmers and growers as the central theme, the campaign clearly conveyed that Dutch agricultural entrepreneurs contribute to future-proof, ground-breaking food production in harmony with the environment and society. The PR campaign has since been terminated and the three 'Dutch Farming' themes (Smart Feeding, Healthy Soil, Plants and Animals, and Power in the Chain) now form part of Agrifirm's body of thought.

## 2. Six Pillars for Impact within the Supply Chain

*Agrifirm wants to create value for customers and members in a sustainable manner through means of its Corporate Social Responsibility (CSR). The demand for food is growing due to increasing prosperity and a growing world population. Efficient and sustainable agriculture is a prerequisite for producing sufficient and healthy food. Agrifirm's CSR policy derives from its 'Working towards Tomorrow' operating principle.*



Agrifirm looks ahead and, together with customers and chain partners, works on innovative and sustainable solutions that enable livestock farmers and growers to continue to operate 'tomorrow' as well. The six pillars of the CSR policy form the foundation for sustainability in Agrifirm's daily business operations. Each pillar comprises a link in the chain where Agrifirm can have an impact: from growing raw materials to food on the plate. In 2016, Agrifirm executed projects relating to each of the six pillars and further operationalised the strategic objectives.

#### The CSR Policy and the Sustainable Development Goals

In 2015, all 193 members of the Uni-

ted Nations (UN) agreed on a future agenda for sustainable development: the 'UN Sustainable Development Goals' (SDGs). On the basis of these goals UN members, including the Netherlands, aim to put an end to poverty and hunger throughout the world, protect human rights and promote sustainable production and consumption. As a globally operating company, Agrifirm aims to contribute to achieving the UN's 17 Sustainable Development Goals (SDGs) and the associated 169 sub-goals. For example, by improving the energy efficiency of our production sites, Agrifirm contributes to SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. With our sustainable procurement policy for agricultural raw

materials, we contribute to achieving SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture. Agrifirm's sustainable procurement policy is consistent with sub-goal 2.4: Promote the share of sustainable and productive agriculture.

#### The Right Focus

Through means of the symposia 'In cooperation with' in 2015 and 'European Agrifood: blueprints for the future' in 2016, Agrifirm tested the focus of the CSR policy and increased the support for this policy. At each symposium, over 100 representatives of chain parties, social organisations and farming organisations spoke about key trends and dilemmas for the agricultural and food





sector. In addition, Agrifirm regularly engages social organisation, chain parties and other stakeholders in a dialogue about sustainability goals and dilemmas in daily operations. Appendix 1 contains a comprehensive overview of these dialogues.

### Materiality Analysis

Agrifirm completed a materiality analysis in 2016. This analysis provides insight into the opportunities and challenges perceived by stakeholders relating to sustainability at Agrifirm. In total, thirteen stakeholders from government, NGOs, processors, retail, academia, media, members/customers and Agrifirm's Works Council were interviewed. Each person interviewed selected the ten most important CSR topics for Agrifirm from a long list of CSR topics focused on the Agrifirm Cooperative, Agrifirm's products and services, and agriculture in general. The perspective of the person interviewed in terms of the importance of a topic relating to CSR at Agrifirm is reflected in the top ten choices made by that person. In a personal/telephone interview the persons interviewed explained their choice of each of the ten topics. Agrifirm's CSR personnel consequently assigned a score to each selected CSR topic. The stakeholders' and Agrifirm's scores were then added to the materiality matrix (See pages 12-13). The Y-axis of the matrix reflects the stakeholders' scores and the X-axis reflects Agrifirm's scores. The higher a topic is positioned on the Y-axis the more important stakeholders consider that topic for Agrifirm. The

farther a topic is positioned to the right on the X-axis, the more important Agrifirm considers the topic for the continuity of the company and the greater the influence that Agrifirm can exert on this topic.

### Safeguarding and Implementing the CSR Policy

To monitor the CSR policy's quality and progress, Agrifirm uses a number of reporting principles: balance, comparability, accuracy, timeliness, clarity and reliability. These principles are consistent with the principles used by GRI G4. We as much as possible use standardised processes for collecting information. The Agrifirm Group's CSR department every 4 months reports to the Agrifirm Group's Executive Board and the Group Board. The Executive Board carries end-responsibility for safeguarding and implementing the CSR policy. This solidly anchors sustainability within the organisation.

## Ruud Tijssens

Director Corporate Affairs, Strategic R&D and CSR

### CSR as a basic Operating Principle

*"In 2015, we started translating the CSR policy's strategic objectives into key performance indicators (KPIs). By the end of 2016 we had made considerable progress. For example, we developed a specific checklist for improving the energy efficiency of our production sites that can now be used to provide a clear management focus and to measure the results. We held a session with all production site managers to discuss the new methodology. The session generated a great deal of energy and people enthusiastically told each other about projects and measures designed to improve energy efficiency. In 2016, we took major steps relating to sustainable procurement and thinking in terms of 'sustainable chains' accelerated. For example, the market demand for the Goed Nest Kip really took off. It is good*

*to see that sustainable livestock farming has become a genuine priority. CSR has become a basic operating principle within Agrifirm and that is something of which I am proud."*

### Keeping each other sharp

*"Engaging in a dialogue with stakeholders keeps you sharp. The debate about crop protection during Ton Loman's farewell symposium has inspired us to develop a new policy. An integrated approach is a key theme in this respect, because crop protection comprises much more than just the crop protection agents. In addition, the complex debate concerning regional raw materials stimulates us to continue to work on specific basic principles and clear scenarios. We regularly discuss this topic with NGOs such as the Natuur & Milieu [Nature & Environment] Foundation and Mili-*

*eudefensie [Environmental Defence]. Engaging stakeholders in serious discussions concerning diverging viewpoints and sharing sustainability dilemmas is a good thing."*

### Fresh Outlook

*"To be inspired and to test our CSR policy, we completed a materiality analysis in 2016. The fresh outlook of thirteen highly divergent stakeholders, ranging from members to NGOs and academia, provided new insights. The majority of the material topics from the analysis has been incorporated into our CSR policy. For example, we have actively been working for years on sustainable procurement, preserving soil quality and closing the mineral recycling loops. Other material topics, such as food safety, market share, and transparent and ethical business operations are important to Agrifirm, but up until now we have not explicitly made these part of our CSR policy. In terms of a topic such as the circular economy, it appears that stakeholders are not yet sufficiently convinced of Agrifirm's contribution. As a supplier to the agricultural and horticultural sectors we actively contribute to the circular economy, for example, by signing the National Raw Materials Agreement and our sustainable procurement policy. The outcome of the materiality analysis motivates us to critically review our six CSR pillars and our CSR-related communications."*



# Materiality Matrix Royal Agrifirm Group

In 2016, Agrifirm completed a materiality analysis to test the Corporate Social Responsibility policy (CSR policy) focus among stakeholders. The analysis provides insight into the opportunities and challenges perceived by stakeholders relating to sustainability at Agrifirm. In total, thirteen stakeholders from government, NGOs, processors, retail, academia, media, members/customers and Agrifirm's Works Council were interviewed. The higher a topic is positioned on the Y-axis the more important stakeholders consider that topic for Agrifirm. A topic that is positioned far to the right on the X-axis, is considered important for the company's success by Agrifirm and is a topic on which Agrifirm can exert influence. Agrifirm incorporates the insights gained through means of the materiality matrix into its communications and the future activities arising from its CSR policy.

## Fresh Outlook

The materiality analysis identifies the topics of material relevance. These are topics that the stakeholders consider important for Agrifirm and on which the company furthermore can exert influence. The most important topics selected by stakeholders are already anchored into Agrifirm's CSR policy. Nevertheless, the fresh outlook provided by 13 stakeholders yielded new insights for Agrifirm. Topics such as feed safety, market share and transparent and ethical business operations are of key importance to Agrifirm, but are not explicitly incorporated into the CSR policy. Agrifirm actively contributes to closing the mineral recycling loops at the farm level and to a more circular economy by developing the Closed Loop Recycling Management Guide and by participating in initiatives, such as the Manure Investment Fund.

## Circular Economy

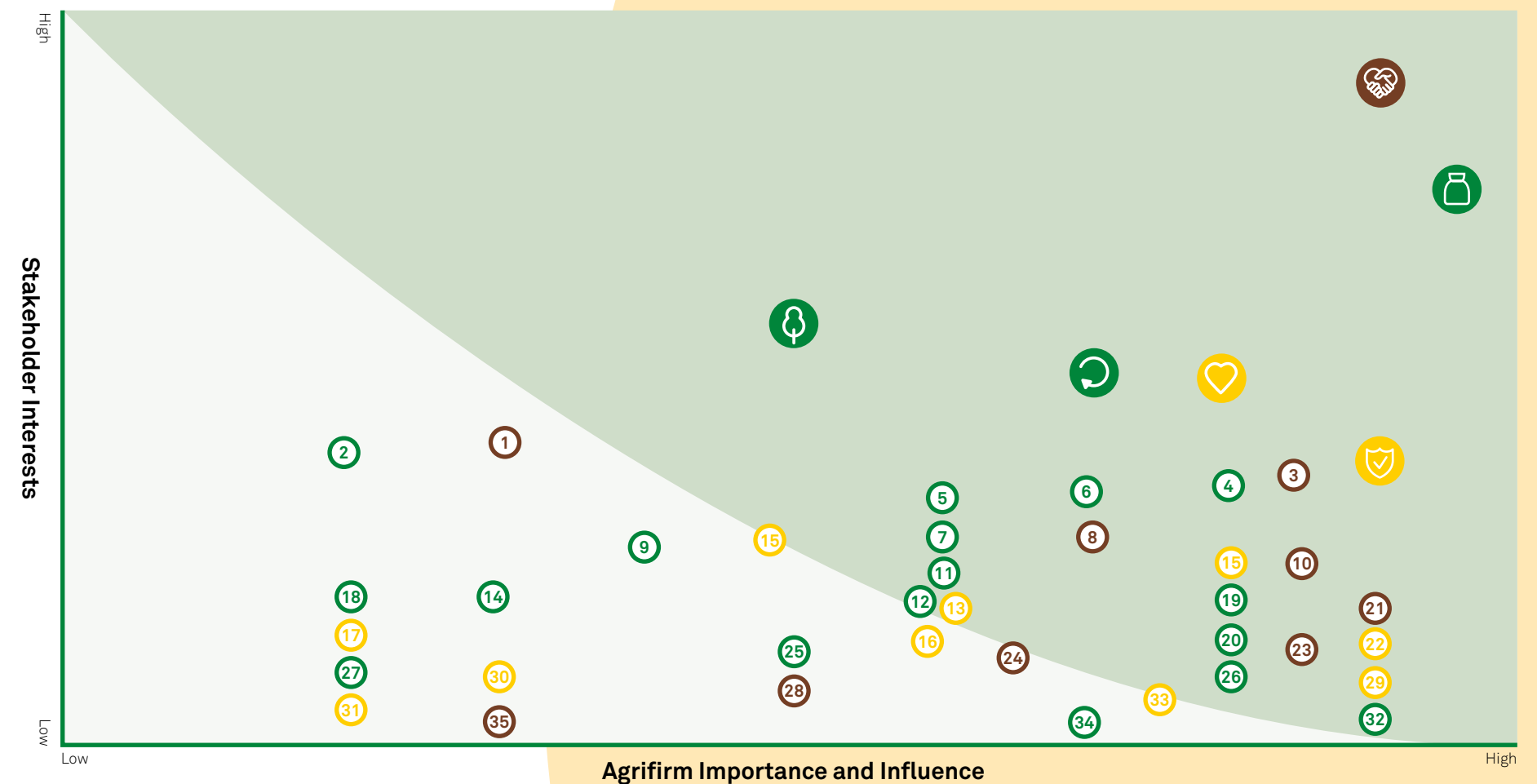
The topic 'circular economy' is a good example of this. "For Agrifirm, as a company at the start of the chain, it is important to have a vision as to how circular thinking translates into its products and services; ranging from animal feeds to green crop protection agents. This should be the guideline for Agrifirm's CSR policy," according to one of the persons interviewed. Agrifirm actively contributes to closing the mineral recycling loops at the farm level and to a more circular economy by developing the Closed Loop Recycling Management Guide and by participating in initiatives, such as the Manure Investment Fund and animal feed sustainability labels.

## Climate

Stakeholders also identified contributing to climate objectives as an important CSR topic for Agrifirm. "The implementation of the Paris Climate Agreement represents a drastic change for the agricultural sector. Agrifirm can translate the climate agreements into products and services." To reduce the pressure on climate, Agrifirm in 2015 drew up strategic objectives for improving the efficiency of its own operations and reducing the CO<sub>2</sub> footprint of the products from the animal and plant-based production chains.

## Greater Focus in Diversity

"A highly productive and efficient agricultural sector was the primary model for a long time. In recent years the focus has increasingly shifted to creating a more diversified agricultural sector with new earnings models. Agrifirm must focus on a low input model and must be able to translate this into feed, soil and soil fertility. Consultants must give priority to the farmer's interests in this respect." Regional food production and organic agriculture are examples of a more diverse form of agriculture. Agrifirm has developed feeds for market concepts such as Goed Nest Kip. These feeds anticipate the demand for a more diversified agricultural sector and are consistent with the wishes expressed by stakeholders. As a cooperative, achieving positive returns at the farm level naturally always is a priority for Agrifirm.



## Top material Topics

- Ethical business operations
- Sustainable procurement of raw materials
- Preservation of biodiversity
- Circular Economy
- Employee satisfaction
- Feed safety

## CSR themes

- Planet
- People
- Profit

## Other Material Topics

- Fair pricing
- Genetics technology
- Customer satisfaction
- Crop protection agents
- Climate
- Animal health and animal welfare
- Grazing
- Regional production
- Food waste
- Financial performance
- Soil quality and fertility
- Precision agriculture
- CSR support
- Water consumption and quality
- Field staff advisory services
- Sustainable food
- Agriculture and food education
- Patents
- Deforestation
- Electricity consumption
- Preservation of leading position
- Employee training
- Innovative feeds
- Livestock farmers and growers earnings model
- Waste recycling
- Sustainable supply of raw materials (incl. propagating materials)
- Upscaling
- Succession of agricultural entrepreneurs
- Employee safety
- Product taste
- Corporate Social Responsibility (e.g. sponsorship)
- Efficient transport
- Public support for agriculture
- Carbon footprint
- Biodiversity services

\* Agrifirm considers safety in the context of feed safety much broader. The organization produces more than just animal feed.

# Dashboard Strategic CSR Objectives



Sustainable  
Raw Materials



Efficient  
Production and  
Logistics



Efficient Use  
of Raw  
Materials



Healthy Plants  
and Animals for  
Healthy People



Sustainable  
Consumer  
Supply



Employees,  
the Foundation  
for Success

CSR pillar	2016 Process Milestones/Activities	Status	2017 Result Objectives	2020/2025 Objectives
	Regional risk analyses of main raw materials identify the environmental and social issues for each production region. Completed regional risk analyses for corn, wheat and rapeseed meal.	●	Complete risk analyses for sunflower kernel meal, barley and beet pulp.	<b>By 2020, all key raw materials will be incorporated as part of a sustainable procurement policy. The specific risks associated with the production of these raw materials in different regions have been identified, including the associated actions to be undertaken by Agrifirm.</b>
	Findings shared with 80% of the suppliers of corn, wheat and rapeseed meal.	●	Share findings with 80% of the suppliers of sunflower kernel meal, barley and beet pulp.	
	Findings and potential follow-up steps discussed with stakeholders in NL. Preparations initiated for regional stakeholder meetings in countries of cultivation.	●	Engage in discussions with regional stakeholders in at least two countries of cultivation to test risk analyses.	
			Draw up action plans for corn, wheat and rapeseed meal.	
	Quarterly reporting cycle established for collecting SMART objectives and energy efficiency measures for all relevant production sites.	●	Continue quarterly reporting. Incorporate Plan Do Check Act (PDCA) cycle for corporate objectives within companies.	<b>Agrifirm aims for a structural decrease in energy consumption. By 2025, Agrifirm will have improved its energy efficiency by 15%. The energy efficiency of production sites will have increased by 15% in comparison to 2015. As a major buyer of transportation services, Agrifirm has made binding agreements with its carriers about achieving the reduction objectives for energy use and the emission of various substances, such as particulate matter.</b>
	Energy efficiency reporting and actions taken harmonised among subsidiaries. Evaluated and refined reporting in workshop involving managers from all production sites.	●	Evaluate the impact of energy efficiency improvement measures.	
	Developed collective logistics approach, including agreements with carriers concerning the reduction of energy consumption and emissions, such as particulate matter.	●	Initiate SMART quarter reporting related to reducing transport fuel consumption and emissions. Kick-off consisting of meeting with the logistics managers of all subsidiaries. PDCA approach to logistics objectives will become the standard for all companies.	
	Established indicators needed to be able to measure the contribution of Agrifirm's product portfolio and innovations to the environmental footprint of customers in the livestock farming and arable farming sectors. Examples are phosphate efficiency and CO <sub>2</sub> emissions for cattle, and mineral efficiency, the efficient use of crop protection agents and CO <sub>2</sub> emissions for the arable farming sector.	●	Adopt sustainability labels for new AIC/Feed products and services, and analyse the market impact.	<b>By 2025, Agrifirm will have developed sustainable agricultural practices that have the ability to reduce the environmental footprint of the production of animal and plant-based products by our customers by 15% in comparison to 2015.</b>
	Determined Agrifirm's contribution to the environmental footprint of customers. At Agrifirm Feed by combining the sustainability labels for products and services with estimate of market impact.	●	Develop and implement the modified CSR R&D scan for estimating the impact of Agrifirm Plant's products and services on the environmental footprint of the plant sector.	
	Developed a tool designed to reliably estimate the impact of Agrifirm's products and services on the health of plants, soil and animals. Modified the CSR R&D scan on the basis of a literature review and interviews with R&D and commercial managers.	●	Adopt indicators and a weighting method to be able to demonstrate the impact of Agrifirm's products and services on the health of plants, soil and animals.	<b>By 2025, Agrifirm will have developed sustainable agricultural practices. Key in this respect will be the greening of crop protection agents, including a significant increase in the share of low impact agents in the use of crop protection agents by our customers. The natural resistance of animals will have been strengthened to such a degree that the use of veterinary medicines by our customers can be significantly reduced.</b>
		●	2018: Develop relevant KPIs to provide insight into Agrifirm's influence as a consultation partner for sustainable chains and to exert better influence on these chains.	<b>By 2025, Agrifirm will be the main partner for chain parties in developing and testing new chain concepts.</b>
	Adopted indicators and incorporated them into the PDCA cycle: decrease in the undesired turnover of employees, improvement of the results of the employee satisfaction survey and a minimum number of training hours per employee per year.	●	Convert indicators and associated result objectives into SMART indicators and objectives, and develop action plans.	<b>By 2020 Agrifirm will be the 'employer of choice' in the field of agricultural products and leadership will have visibly developed into one of the company's crucial success factors. This manifests itself in various ways within the company, for example by means of a high rate of internal promotions.</b>

## Legend Indicators

- ✓ Strategic objective achieved
- On track
- Partially on track
- Progress impossible to clearly identify in relation to sub-objectives
- Delayed



# About Agrifirm

Agrifirm is a Cooperative in which approximately 17,000 Dutch enterprising farmers and horticulturists have bundled their purchasing power. Agrifirm produces and supplies products and services for feeding animals and cultivating crops. We supply high-quality animal feeds, sowing seeds, fertilisers, crop protection agents and services. As such we contribute to achieving optimal results at the farm level. Agrifirm is made up of several subsidiaries that operate within the Netherlands and abroad. The increase in the value of our enterprise is returned to our members through Cooperative profit distribution. This differentiates us in the market: creating sustainable value for our members is a priority.



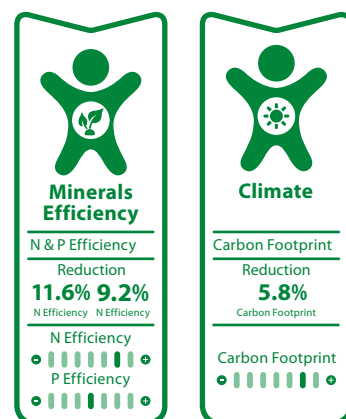
### Efficient Production & Logistics

Agrifirm's logistics contributes to the emission of greenhouse gases and particulate matter. Furthermore, plants use energy for the production of products and animal feeds. By investing in efficient production and logistics, Agrifirm aims to structurally reduce its energy consumption. To enable us to focus on energy efficiency, Agrifirm in 2016 implemented the Plan Do Check Act working method for efficiency objectives and measures at production sites. This approach was discussed in a workshop involving the managers of all production sites.

### Efficient Use of Raw Materials

Doing more with less is the cornerstone of our sustainability policy. Agrifirm aims to help members and customers achieve positive production levels with less feed, fertilisers or crop protection agents. This is not only good for the environment. It also improves returns for our members and customers. In 2016, we calculated the environmental impact of our feed concepts on the basis of indicators, such as phosphate efficiency. We are effectively on track in the cattle sector. The TopStart product contributes to improved phosphate efficiency and an improved CO<sub>2</sub> footprint.

#### Environmental Impact of TopStart

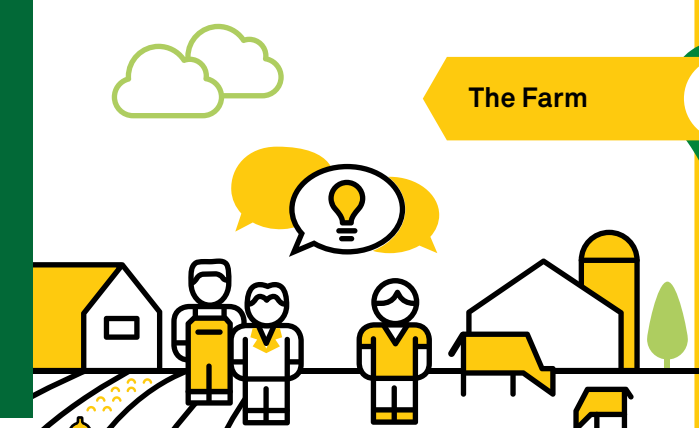


### Healthy Plants, Soil and Animals for Healthy People

Resistant plants and healthy animals need fewer supporting substances such as crop protection agents or veterinary medicines. Agrifirm's policy is focused on structurally using less polluting agents, while still achieving good results. This way we are also anticipating stricter regulations and the public's desire to use fewer such agents. In 2016, we developed a method designed to demonstrate the impact of innovations on the health of plants, soil and animals.



### Production Sites



### The Farm

### Turnover and Result

(€ millions)

2.170	Turnover
30,6	Net Profit
33	Member Dividend

### 1 Procurement

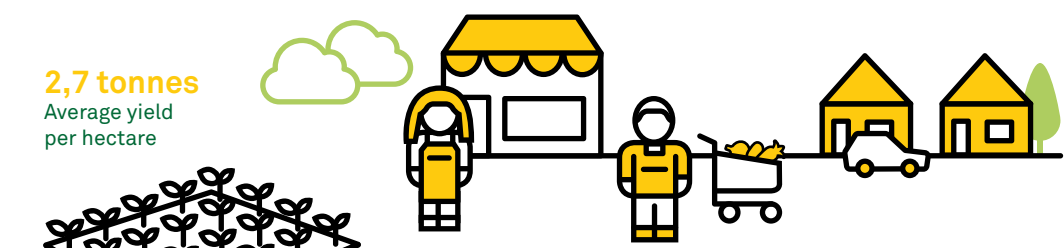
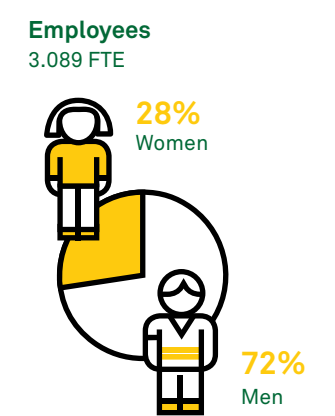
### Sustainable Raw Materials

The demand for food will increase over the coming decades. This increases the pressure on raw materials, water and the natural environment. Agrifirm consequently is working on procuring sustainably cultivated raw materials for its animal feeds. For the first three main raw materials (wheat, corn and rapeseed meal) we identified the environmental and social issues in the relevant production countries, in 2016. We discussed the findings with suppliers.

### 2 Employees

### Employees, the Foundation for Success

Expert, motivated employees are indispensable to a successful enterprise. By offering excellent terms and conditions of employment, training and career advancement opportunities we aim to be an attractive employer for existing and new employees.



### Sustainable Consumer Supply

A broader choice of sustainable and healthy food helps people make a positive change to their consumption pattern. Every party in the chain makes an indispensable contribution to this. Together we work on product concepts with shorter chains and on the use of local raw materials. Together with Alpro, Agrifirm anticipates the social demand for locally cultivated soy.

### 2,7 tonnes

Average yield per hectare

### 80 hectares

NederSoy

### 24 Growers

### 5 Consumer

#### Sales Volume (x1000 tonnes)

4.021	Compound feeds	531	Premixes & concentrates	409	Cereals, potatoes, onions and carrots
2.154	Co-products	412	Fertilisers	141,9	Crop protection agents (€ millions)

### 3. Working on Sustainable Raw Materials

*The world population is expected to grow to 9 billion people by 2050. This will lead to an increased demand for food, and exert greater pressure on the use of raw materials, water and the natural environment. Agrifirm accepts its responsibility by transparently making sustainable choices relating to raw materials, suppliers and crop growing regions. This way we provide a sustainable contribution to feeding the growing world population.*

We formulated the following objective last year: By 2020, we will have implemented our sustainable procurement policy for agricultural raw materials, based on regional risk analyses. Agrifirm processes by-products from the food and bio-based industry into high-quality animal feeds. Together with suppliers, Agrifirm is working on the sustainable and responsible cultivation and use of raw materials, such as wheat, corn and soy.

In 2016, Agrifirm pursued two tracks in working on sustainable raw materials. This year, a sustainable procurement policy was developed and rolled out for the main stream of raw materials (see special feature on page 20). For specific raw materials, such as soy and palm oil, Agrifirm will continue to abide by the agreements of, for example, the Dutch Nevedi Agreement and the Belgian Compound Feed Industry Association (Bemefa). In addition, Agrifirm is devoting a great deal of attention to developing the use of co-products from the food industry. With the development of regional alternatives for protein-rich raw materials, such as soy

grown on Dutch soil, we are anticipating the growing attention focused on the mineral recycling loop and regional food systems. The Recycling Loop Test (see page 19) makes it possible to critically assess all aspects relating to closing recycling loops.

#### Dutch Soy

The Dutch soy sales market is growing due to the increasing demand for high-quality, locally grown soy that is not genetically modified. Agrifirm believes in the market opportunities that the cultivation of soy offers arable farmers and livestock farmers. In 2016, 24 farmers cultivated a total of

80 hectares of soy. The average yield per hectare was 2.7 tonnes. The best 25% scored an average of 3.6 tonnes per hectare, with an outlier of over 4 tonnes per hectare.

#### Green Deal

In 2016, Agrifirm established the Green Deal Soy in the Netherlands. Agrifirm signed the Green Deal together with national and regional governments. The goal is to enable the cultivation of soy in the Netherlands to grow significantly to at least 10,000 hectares. The agreements in the Green Deal are focused on improving yields and developing market chains for Dutch soy. For

#### Soy in accordance with the FEFAC Soy Sourcing Guidelines

All soy purchased by Agrifirm must comply with the FEFAC Soy Sourcing Guidelines. The guidelines comprise the criteria to be met by sustainable soy developed in a European context. Fifteen sustainable soy schemes have since been approved by the FEFAC, including RTRS, Proterra (non-GMO) and several sustainability programmes of large soy suppliers such as Cefetra, Cargill, Bunge and ADM. In 2016, the Dutch animal feed sector once again collectively and responsibly procured the volume of palm oil products required for the Dutch market with Green Palm certificates of the Round Table on Sustainable Palm Oil (RSPO).

cultivation to be profitable, the quality, yield and the financial balance per hectare must be further increased.

#### Recycling Loop Test

To create a sustainable agricultural and horticultural sector and a sustainable livestock farming sector it is important to close the nutrients recycling loops. Wageningen Livestock Research developed the Recycling Loop Test in 2015. This instrument provides insight into the effectiveness and feasibility of measures designed to close the minerals recycling loops. The test makes a distinction between

the impacts on the recycling loop at the farm level and the impacts on recycling loops elsewhere in the Netherlands, Europe and the world at large. In 2015 and 2016, the Recycling Loop Test was tested using a number of case studies, including European raw materials, manure digestion (with and without co-digestion), manure separation and land-based dairy farming. The Recycling Loop Test is proving to be a useful tool for companies, governments and social organisations for the purpose of bringing the effects of practical and policy measures into focus and objectively assessing them.

Agrifirm is one of the initiators of the Recycling Loop Test and aims to close recycling loops. However, this does not automatically mean opting for the regional cultivation of raw materials. The Recycling Loop Test makes it possible to critically assess all aspects involved in closing recycling loops. As far as Agrifirm is concerned, the Recycling Loop Test should be leading in the collective decision-making process. A broad social alliance of NGOs, provincial and national government organisations and the business community shares this vision.

### 'Agrifirm is asking the right questions'

*"Agrifirm's new sustainable procurement policy in the animal feed sector is highly innovative. Agrifirm this way demonstrates that it is serious about the social and environmental issues relating to the cultivation of raw materials and furthermore recognises that certification is not the only answer in this respect. It is important for Agrifirm to engage local stakeholders in discussion about the issues that must be given priority, and about identifying structural solutions. It then becomes possible to determine what Agrifirm and customers can do, and what other parties, such as NGOs and farmers need to do locally.*

*This is a complex process and may seem like a step backwards. However, a shift from certifying individual farms to making entire regions sustainable is occurring in the process of making chains sustainable. The issues that Agrifirm is now raising and the steps the company is taking are the right ones and are highly consistent with this new approach. However, Agrifirm cannot solve these challenges all on its own, the problems are far too great for that. By organising a broader movement with more involved animal feed companies, they can share issues, uncertainties and costs with each other. By subsequently involving customers and stakeholders, such as NGOs, this will result in a powerful movement within the animal feed sector."*

#### Lucas Simons

Founder and Director NewForesight





# New Sustainable Procurement Policy

*At the beginning of 2016, Agrifirm launched a new sustainable procurement policy for the raw materials used in animal feeds. In addition to existing responsible soy and palm oil initiatives, Agrifirm will now also proactively start working on all of Agrifirm Feed's raw materials. In view of the scope, it was decided to start off with Agrifirm Feed Nederland's raw materials: corn, wheat, rapeseed meal, barley, feed cereal meal, beet /citrus pulp and sunflower kernel meal. The total tonnage involved for Agrifirm Feed Nederland is 2.9 million tonnes, or 65% of the total purchase of raw materials for Agrifirm Feed's compound feed production. In the coming years, we will expand this approach to our branches abroad that are major buyers of agricultural raw materials.*

## From Issues to Priorities

In 2016, Agrifirm together with an independent expert identified the social, environmental and administrative risks at play in thirteen countries of origin relating to the main raw materials corn, wheat, rapeseed meal. We shared the outcomes of these regional analyses with our suppliers. The goal is to discuss this with the suppliers of at least 80% of the purchased volume of these three raw materials. Once we have attained this 80%, the topics that will be given priority in each relevant country of cultivation will be determined in cooperation with the suppliers.

## Dialogue

Furthermore, in 2016 we discussed the progress relating to the sustainable procurement policy with Dutch social organisations and chain partners. The focus here was on the

regional analyses. The findings and in particular the possible scenarios for Agrifirm to effect positive change were extensively discussed. Agrifirm will continue the dialogue on achieving the objectives over the years ahead with these partners.

## Action Plans

In 2017, for each region, Agrifirm, together with the suppliers of corn, wheat and rapeseed meal will, where

necessary, identify feasible and high-impact measures and develop an action plan. In a number of these regions, Agrifirm will organise stakeholder sessions concerning the identified risks. In addition, for three new main feed materials (sunflower kernel meal, barley and beet pulp), the same cycle will be started up by identifying the issues in the specific production regions.



# 4. Efficient Production and Logistics

*Efficient processing of raw materials and smart logistics are high priorities for Agrifirm. Agrifirm's logistics produces emissions of greenhouse gases and particulate matter. Furthermore, plants use energy for the production of products and animal feeds. By investing in efficient production and logistics, Agrifirm aims to decrease the energy consumed and the emissions produced by transport. This reduces the environmental and climate burden.*

By 2025, Agrifirm aims to improve its energy efficiency by 15% compared to 2015. The energy efficiency of production sites will have increased by 15% in comparison to 2015. As a major buyer of transportation services, Agrifirm has made binding agreements with its carriers about achieving the reduction objectives for energy consumption and the emission of various substances, such as particulate matter. Agrifirm aims to structurally reduce its energy consumption by means of the efficient processing of raw materials and smart logistics.

In 2016, Agrifirm began collecting data relating to SMART objectives and energy efficiency measures for all relevant production sites on a quarterly basis. The first reporting cycle in 2016 demonstrated that there was a wide variation in how energy savings were being reported. This provided the stimulus needed to organise an inspiration session in Nuscience's new energy-efficient plant in Drongen, Belgium.

The reporting was harmonised in this workshop involving the managers of all production sites. To reduce energy consumption and the emission of various substances, such as particulate matter, Agrifirm will implement a quarterly reporting cycle for carriers, starting in 2017. Effective from 2017, we will also devote more attention to having the impact of the measures reported by carriers independently tested.

## Energy-efficient Production

At the end of 2015, Nuscience opened a new, energy-efficient plant in Drongen (Belgium) for the production of starters, specialties and premixes for animal feeds. The far-reaching automation and process innovations make the plant unique. Various best practices and innovations from other sectors have been applied within the plant. The new plant is an important step by Nuscience towards the comprehensive optimisation of the group's production.

## Energy-efficiency Improvement Measures

In 2016, Agrifirm implemented additional energy-efficiency improvement measures. The lighting at Agrifirm Plant's distribution and storage sites was replaced by LED lighting. At the Agrifirm Plant site in Utrecht, an adjustment was made that now makes it possible to use the heat from the compressors for heating the operating areas. LED lighting was also installed in the plant in Kaba in Hungary. Motion sensors at the sites in Kaba and Győr ensure that the production areas are only lit when necessary. In Poland, a new, faster milling line resulted in an energy consumption reduction of 5% kWh per tonne of animal feed produced. Appendix x contains additional information about the measures implemented by Agrifirm to improve energy efficiency at production sites.

## Agrifirm Energy Consumption

Agrifirm uses various energy sources for producing animal feeds and products, distributing feeds and



## 'A smart focus beyond our own boundaries'

*"In February 2017, our new plant in Drongen won the Factory of the Future Award. We are extraordinarily proud of this! We based the design of this plant on the knowledge and many years of experience of our own people."*

*The plant was constructed in accordance with a top-down concept, whereby our products run from the silos high up in the tower across the mixing lines located lower in the plant down to the bagging or bulk lines. This way we avoid the need for transport via the elevators, which is better for quality, and also saves energy.*

*Through means of our concept with many silos and by the smart placement of access and inspection hatches we are able to efficiently maintain the silos. We also found smart solutions by taking a good look at best practices in other sectors. A good example of this is the miniload concept in the logistics sector. The miniload is used to transport goods to people, rather than the other way around, via a rail system using energy-efficient electromotors. This is far better from an ergonomic perspective, because workers no longer need to lift the loads.*

*We make maximum use of daylight or LED lamps in areas where there is almost always continuous human activity. Where there is little need for light we use other lighting solutions with motion sensors. Yet another energy-saving measure is the reuse of residual heat emitted by compressors using heat exchangers. In Drongen we keep the area with storage tanks for rapidly congealing liquids at the proper temperature. An investment with a repayment period of just over 4 years. Because sustainability must be based on a solid business case. In countries, such as the Ukraine, Hungary or China we use this residual heat for floor heating. This illustrates that we also apply experience and techniques within the group at large. Nuscience focuses beyond its own boundaries. Learning from each other within the Agrifirm Group and learning from other sectors is extremely important!"*

**Chris Mercier**  
COO Nuscience Group



required materials, such as fertilisers and sowing seeds, to members and customers and for lighting and heating offices, storage and production sites. Agrifirm aims to lower its energy consumption.

The decline in electricity consumption (kWh) in comparison with 2015 can be explained by the replacement of the old plant in Drongen and Baasrode by the new Nuscience plant in Drongen (BE). Liquid gas is used to power the forklift trucks (internal transport). In 2016, the consumption at the Polish production site was incorporated into the figures, which explains the increase.

**Agrifirm Transport Energy Consumption**

We are configuring our logistics to be as efficiently as possible. This not only makes the operational processes more flexible, it also reduces energy consumption and the emission of CO<sub>2</sub> and particulate matter. Agrifirm has signed agreements with logistics service providers to increasingly reduce fuel consumption

and the emission of greenhouse gases and particulate matter. In 2016, the integrated planning software package Quintiq was introduced by Agrifirm Feed. With this planning software package Agrifirm manages delivery performance, working hours, truck axle pressure and the tonnage per truck. The connection between the planning centre and the onboard computers in trucks was renewed in 2016. This provides access to real-time information and makes it possible to quickly adjust transport as needed. Agrifirm Feed makes use of 2 LNG powered trucks that use liquid gas as a fuel and emit fewer harmful substances. Effective from 2017, all vehicles used will at a minimum comply with the EUR 5 emission standard.

**CO<sub>2</sub> Emissions**

In 2016, Agrifirm calculated its CO<sub>2</sub> emissions (Organisational Environmental Footprint) on the basis of its energy consumption. The results of the CO<sub>2</sub> emissions are based on the emission factors published by Stimular (on the basis of CE Delf

2010) and the Climate Neutral Group (on the basis of the NL Agency, 2012 CO<sub>2</sub> Performance Ladder). In 2016, the CO<sub>2</sub> emissions were comparable to the emissions in 2015:

- > direct energy: 60,948,241 kg CO<sub>2</sub>-equivalent
- > indirect energy: 81,296,211 kg CO<sub>2</sub>-equivalent

**In 2016, the energy consumption of the companies in the Agrifirm Group was as follows:**

	2016	2015
Gas (m³)	13,036,365	13,248,917
Gas (l)	31,704	21,288
Electricity (kWh)	159,048,088	163,237,467
Coal (tonnes)	14,131	12,783
Heating oil (l)	491,783	481,957
Diesel (l)	899,337	724,065
Petrol (l)	0	2,800
AdBlue (l)	0	0
Share of renewable energy	0.14%	1.85%



## 5. Efficient Use of Raw Materials

*Agrifirm supplies products and services that produce better returns at the farm level. Efficient production ('more with less') reduces the environmental burden of the agricultural and horticultural sectors. Agrifirm aims to be a leader in this area by doing research into product innovations that help our members and customers achieve equal or higher production levels with less feed, fertilisers or crop protection agents.*

By 2025, Agrifirm will have developed sustainable agricultural practices that have the ability to reduce the environmental footprint of the production of animal and plant products by our customers by 15%. Agrifirm invests in product innovations that help our members achieve higher production with less.

### Environmental footprint products and services Agrifirm

Agrifirm's products and services contribute to the environmental footprint of animal and plant production chains. On the basis of interviews with AIC/Agrifirm Feed and Agrifirm Plant R&D and commercial managers, potential indicators have been selected that provide clear insight into Agrifirm's impact. A distinction is made between various sectors in the animal production chain. The CO<sub>2</sub> footprint is the most relevant indicator for the poultry and pig sectors. The CO<sub>2</sub> footprint calculates the emissions of greenhouse gases in CO<sub>2</sub>-equivalents. The mineral efficiency is also included in the calculation of the environmental impact for the cattle sector. On the basis of the sustainability labels,

combined with the estimated market share, Agrifirm is able to determine the impact of a feed concept.

### Efficient products and concepts for livestock farming

The calculation of the environmental footprint shows that Agrifirm is well on its way towards achieving a 15% reduction for the cattle farming sector (see Table). Several producers and Agrifirm concepts for the poultry sector also contribute to reducing the environmental footprint of members and customers. After the sustainability labels for the pig sector are calculated, it is also possible to determine the impact of Agrifirm's products and services on the pig sector. The ultimate goal is to have a product portfolio by 2025 which enables the livestock farming sector to reduce its environmental footprint by 15%. This challenge will be integrated into the development

Sector	Percentage Improvement in Environmental Footprint
Poultry	2.84%
Cattle	8.54%
Pigs	Unknown

and innovation of new products and services over the coming years. Experts within Agrifirm identify the efficient use of crop protection agents, mineral efficiency and CO<sub>2</sub> emissions as the most relevant indicators for the plant production chain. The calculation of the environmental impact of products and services for the plant production chain is not yet entirely feasible due to the lack of sufficient data. Through means of an adjustment to the existing CSR R&D Scan, it will become possible to reliably estimate the impact of innovations on the environmental footprint of plant products in the future.

### Mineral Efficiency

Doing more with less is the cornerstone of our sustainability policy. This is why Agrifirm actively encourages manure processing so that the valuable components in organic manure

are put to optimal use. This is important, because manure components, such as phosphate, are finite raw materials. Agrifirm participates in the Manure Investment Fund. In 2016, an announcement was made that the Manure Investment Fund is providing subordinated loans to projects that collectively will establish a 3 million kg phosphate processing capacity.

### Phosphate Reduction

Agrifirm Feed is focusing on redu-

cing phosphates in animal feed. By reducing the phosphorous content (P content) of feeds and due to the quality of the available raw materials, the average phosphorous content (P content) of the Agrifirm pig feeds dropped by 1.4% in 2016. The phosphorous content of cattle feeds (dairy cattle, beef cattle and breeding calves) in 2016 was 4.28, a decline of 0.33P (7%) in relation to 2015. This decline is the result of the refinement of the agreements in

the Nevedi Agreement concerning phosphate in animal feeds. In its new range of dairy cattle feeds, Agrifirm aims for high mineral efficiency and the lowest possible phosphate content.

### Big Data and Precision Agriculture

Big Data can contribute to a healthy product and higher returns for growers and livestock farmers. Furthermore, it provides opportunities for working more sustainably

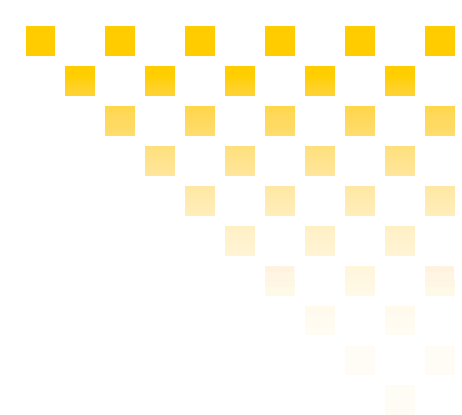
## 'Manure as a Valuable Raw Material'

*"Most often you will see the word manure used in combination with the word 'problem', but this is most definitely going to change. Due to the increasing scarcity of raw materials, the efficient reuse of phosphate, nitrogen and potassium in manure is becoming increasingly more important. Furthermore, we can produce new products/semi-finished products with a high added value from manure for the agricultural and chemical sectors. As a cooperative, Agrifirm likes to contribute to the transition of manure processing to mineral valorisation. To develop the market for the high-quality valorisation of mineral products, we created the Manure and Mineral Valorisation Taskforce in 2016, together with various other organisations, including the Dutch Federation of Agricultural and Horticultural Organizations (LTO), Nevedi, the Dutch Dairy Association (NZO), the Rabobank and the Pig Farming Products Organisation (POV). The objective of the Taskforce is to support the transition to mineral valorisation and to develop specific measures. One of these measures is improving the market value of manure products, making it possible for the off-the-farm cost per tonne of liquid manure to decline by € 3 - € 5. The use of raw manure in the arable farming sector must of course continue to be possible. Agrifirm like no other understands the value of this practice. However, the current situation with low prices for high-quality manure products is not tenable for the livestock farming sector over the long term."*

### Ruud Tijssens

Director Corporate Affairs, Strategic R&D and CSR Agrifirm and Chairman of the Manure Investment Fund.





and efficiently. Agrifirm is focused on linking and interpreting data streams so as to enable it to provide the best possible advice concerning, for example, feed or fertiliser dose. Agrifirm is a member of the AgriConnect association, which promotes the exchange of electronic data in the agricultural sector. The association uses various means to accomplish this, for example by developing standards that make it easy for different parties in the chain to share information. Smart Dairy Farming and Akkerweb are examples of more sector-oriented 'Big Data' initiatives in which Agrifirm participates.

#### Smart Dairy Farming

The Smart Dairy Farming innovation project is developing new technology that enables farming data to be used for improving efficiency on

the farm. In 2016, the Smart Dairy Farming Foundation started working on developing a Data Hub (electronic highway) for the dairy farming sector. It is estimated that by means of the Data Hub livestock farmers can earn up to 40% higher financial returns and it makes data-based feeding possible. This contributes to a lower environmental footprint. The Data Hub is expected to be ready for use by the end of 2017.

#### Akkerweb

In 2016, Agrifirm Feed took another step in precision agriculture; site-specific fertilising using liquid manure and compost. By developing specific task maps, growers and agricultural contractors can now vary the organic fertiliser dose within a plot. This makes better utilisation and higher yield possible. The

technique is part of the Veris Soil Advisory Service developed earlier in joint cooperation with Agrifirm. In 2016, Agrifirm Plant in cooperation with DroneWerkers introduced a comprehensive crop advisory service based on the deployment of eBee: topFLY eBee for the site-specific fertilisation of crops. With the new service, Agrifirm Plant offers site-specific fertilisation with absolute nitrogen recommendations, which contributes to the optimal growth of crops and limits the leaching of elements. To further encourage this data-driven innovation, Agrifirm Plant and Wageningen UR in 2016 launched the GEO Platform Akkerweb. This independent and open platform brings Precision Agriculture and Big Data together.

## 6. Healthy Plants, Soil and Animals for Healthy People

*Plants and animals with high natural resistance need fewer supporting substances such as crop protection agents and veterinary drugs. Agrifirm's policy is focused on structurally using less agents of this nature, while still achieving good results. This benefits plants, animals, the environment and the entrepreneur's wallet.*

By 2025, Agrifirm will have developed sustainable agricultural practices. Key in this respect will be the greening of crop protection agents, including a significant increase in the share of low impact agents in the use of crop protection agents by our customers. The natural resistance of animals will have been strengthened to such a degree that the use of veterinary medicines by our customers can be significantly reduced.

Agrifirm develops products and services that reinforce the natural resistance of plants, animals and soil.

In 2016, Agrifirm started to develop indicators designed to be able to provide clear insight into the impact of products and services on the resistance of plants and animals. An extensive review of the literature shows that various indicators for determining the 'health' of plants, soil and animals are interrelated in complex ways. Agrifirm has only limited influence on these indicators. There are many actors and factors that exert influence on the farm. To determine the impact of Agrifirm Plant's and Agrifirm Feed's pro-

ducts and services on the farm, the existing CSR R&D Scan methodology was adjusted. The criteria for determining the impact of innovations on resistance were transformed into SMART formulated weighting factors by sector. The indirect effects of products and services are not included in the impact analysis.

In the new CSR R&D Scan structure, each Agrifirm product or service is given a score for the contribution it makes to reducing the risk of disease or environmental damage, and the impact on farming operations. A product or service is given a higher score when it can be implemented quickly and easily in actual practice, and when it can be demonstrated that the product or service has a clear impact on the indicator and its operation is externally validated. By modifying the CSR R&D Scan, Agrifirm can more easily measure the impact of its products and services over the past year and estimate the impact for the coming two years. This enables Agrifirm to manage in terms of the progress made on the strategic objectives for healthy soil, plants and animals.

#### Responsible Use of Crop Protection Agents

Changing regulations and active social debate are characteristic of the crop protection issue. In anticipation of this, Agrifirm Plant in 2016 revised its crop protection policy. The effective use of integrated crop protection (Integrated Pest Management; IPM), Precision Agriculture and the development of low-impact agents (low risk for humans, animals and the environment) are the basic principles of the new policy. Agrifirm wants to provide growers with an integral approach in which soil, varieties and crops complement each other. With farm-wide consultancy and solutions that are not only focused on crop protection agents, but that also consider soil, resistant crops and prevention. The data-based advice provided to growers is not only limited to sustainable cultivation, but also includes reducing the impact on the surrounding environment, for example by reducing farm and other emissions.



Usage of top FLY eBee in the flower bulbs.





## ‘Organic when possible, chemical when necessary’

*“Integrated Pest Management (IPM) is a strategy that enables growers to prevent or suppress diseases and plagues in crops with the aid of beneficial organisms, proper monitoring and the minimum possible crop protection agents. This way growers create a stable cultivation system with an acceptable damage threshold and the resilience needed to absorb diseases and plagues. Improved biodiversity at the farm is a welcome side-benefit of integrated pest management, but is not an objective in itself.*

*When diseases and plagues break out, it is important for growers to first apply organic agents, such as an ichneumon wasp mix. If necessary, growers can apply selective crop protection agents. This way any disruption to the cultivation system is minimised. Some diseases and plagues can only be controlled using chemical crop protection agents. Chemical agents, by definition, are not necessarily worse for the environment than organic crop protection agents or natural agents. It is important to adopt a balanced approach to crop protection and to be critical of the findings of scientific research that are not founded on actual practice.*

*With its objective of encouraging the adoption of integrated pest management practices and the use of low-impact agents, Agrifirm is taking a step in the right direction. I encourage Agrifirm to acquire more practical experience with integrated pest management (IPM) in different sectors and with different crops. Agrifirm can then roll out the findings of its practical research to its members and customers. There is a great deal to be gained from an integrated approach to crop protection.”*

**Guido Sterk**

Director IPM Impact



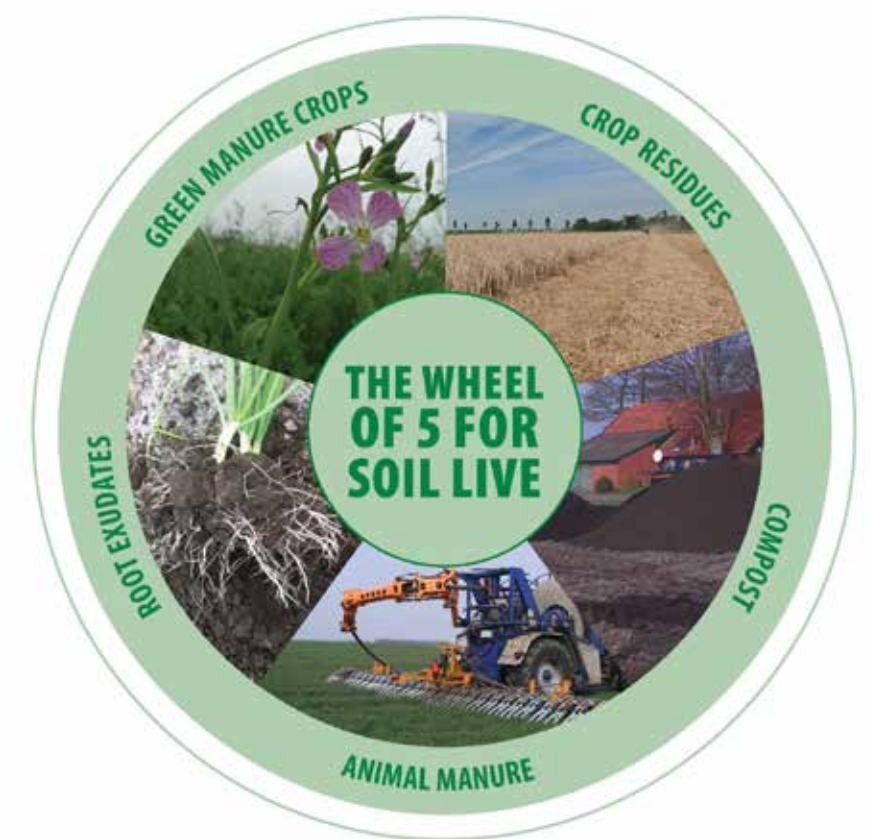
### Soil Balance

Increasingly more farmers want to know how and with what to keep their soil fertile and sustain optimal growth over time. Agrifirm defines soil fertility as the maintainable and sustainable capacity of the soil to provide a plant with nutrients and moisture. The varied supply of five different nutritional sources of organic substances is essential: green fertilisers, plant residues, compost, animal manure and root residues. The supply of nutrients determines the soil life. If there is a lot of soil life the soil is resistant and crops grow well. In 2016, Agrifirm launched the Mineral Planner for dairy farmers. Dairy farmers can use the planner to keep the quantity of minerals in the soil up to par and to quickly respond to new laws and regulations.

In 2016, Agrifirm, together with Biomygreen, conducted research into a seed coating with beneficial soil fungi, such as the mycorrhiza fungi. The mycorrhiza fungus grows inside and around the roots of crops and supplies them with important nutrients, such as nitrogen, phosphate, potassium and magnesium. Last year, Agrifirm Plant conducted trials to control harmful soil organisms by applying the Soil Resetting method. This is an environmentally friendly and anaerobic (without oxygen) method of remediating the soil from harmful organisms. The trials demonstrate that Soil Resetting is successful in controlling various harmful

nematodes, fungi and weeds. The nature-friendly and biological method matches Agrifirm's policy focused on 'green' soil treatment

and green crop protection. The new method is a safe alternative to traditional products that can only be applied under strict conditions.



*“The use of chemical crop protection products is expected to continue to drop over the coming years, but will not disappear altogether,” according to Tjerk Wagenaar, Director of the Natuur & Milieu [Nature and Environment] Foundation. “We can live with this, provided the use of chemical agents is restricted to products that do not harm the environment.”*



### **Innovative Technology for Healthy Animals**

The engineering consulting firm Sweco and Agrifirm Exlan have developed the ZERO Stable: an energy-neutral stable without emissions, that reuses residual flows, and provides for an optimal stable climate for animals and devotes attention to animal wellbeing. The animals can adopt their natural behaviour and a smart roof design controls the diffuse entry of daylight into the stable to promote the animals' biological rhythm. The climate system provides healthy air for humans, as well as animals. A fuel cell converts the methane and ammonia from the manure into heat and electricity for the stable's technical systems. Combined with thermal solar panels and thermal energy storage, this makes the stable energy-neutral.

In 2016, Sweco and Agrifirm Exlan explored the technical and economic feasibility of the ZERO Stable. Discussions are underway with a number of interested pig farmers and other parties about the construction of a first stable. Livestock farmers can recover the high investment through means of improved technical results and potential additional revenues due to sales volume within a chain concept.

### **CSR R&D Scan**

Agrifirm invests in fundamental and practical research to realise higher yield and sustainability impact at the farm, to maintain its position as market leader and to contribute to a sustainable food supply. The

new structure of the CSR R&D Scan makes it possible to estimate the impact of products and services at the farm level. Agrifirm Plant's products and services are scored on various aspects, including reducing risks to aquatic and soil life, reducing the risks of substances leaching into groundwater, and reducing the input of minerals. Agrifirm Feed's products and services are scored in terms of reducing sector-specific animal diseases or health disorders. Together with the impact on business operations, implementation in actual practice and the independent verification of the operation of a product or service, this produces an impact score. Products that score high make a greater contribution to a low environmental footprint, better plant, soil or animal health, than low-scoring products and services.

### **Kalvolac Start**

Diarrhoea in calves is a frequently occurring problem among young cattle. The Kalvolac Start milk powder developed by Nutrifeed can help tackle this problem. The feed consists of high-quality protein components, antibodies and substances that support intestinal health. A specific additive helps improve the manure's consistency. Research has demonstrated that Kalvolac Start can reduce and shorten the period of diarrhoea for calves. The feed furthermore supports the calves' recovery after diarrhoea. Kalvolac Start scores well in the CSR R&D Scan. Diarrhoea among calves is a key farming risk and Kalvolac Start can have a positive impact on preventing

or reducing diarrhoea. It is easy for dairy farmers to use this special feed quickly and effectively and the product was furthermore developed and verified using third party knowledge. Kalvolac Start scores nine out of a maximum of twelve points, which equates to a 75% impact score.

### **Virus Reduction Guide app**

Agrifirm's BeperkViruswijzer [Virus Reduction Guide] app provides growers with insight into the length of time seed potatoes and flower bulbs are protected against lice that transmit viruses. With the help of local weather conditions, the app calculates the right time interval and the right time at which to apply crop protection agents. The custom application of crop protection agents contributes to reducing the risks to beneficial organisms, reducing virus pressure and a better harvest. Tests with the BeperkViruswijzer app demonstrate that its use has a clear impact on controlling lice and viruses. Because the use of the BeperkViruswijzer app reduces the farmer's risks and because it can be used quickly and easily in actual practice, the app has a 75% impact score in the CSR R&D Scan.

### **Phytophthora app**

The new Phytophthora app offers growers a preventive management strategy that results in the effective use and choice of agents. The app for smartphone or tablet provides preventive spraying recommendations with spraying preferably occurring just before the predicted critical periods. Using a simple warning

system, the grower can see exactly which plots require additional attention. When a plot is coloured green, it does not require spraying. When it is coloured orange, preventive spraying is recommended. A red-coloured plot is a sign that unusual conditions exist that require additional attention. The advisory system takes the weather conditions and the current crop growth into account. In 2016, eighty growers tested the app, which was developed by Agrifirm Plant and Wageningen University & Research. A final version of the Phytophthora app will become available in the spring of 2017.

View the results of the CSR R&D-scan for Agrifirm products and services on the following pages.

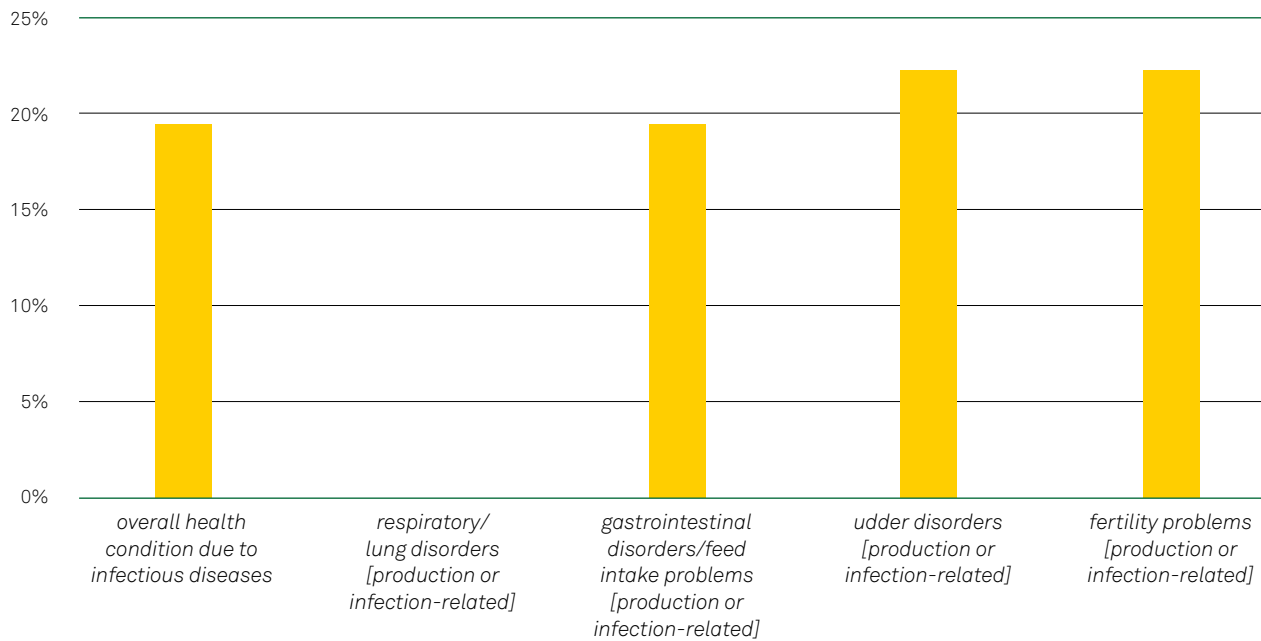




# Agrifirm Feed Results

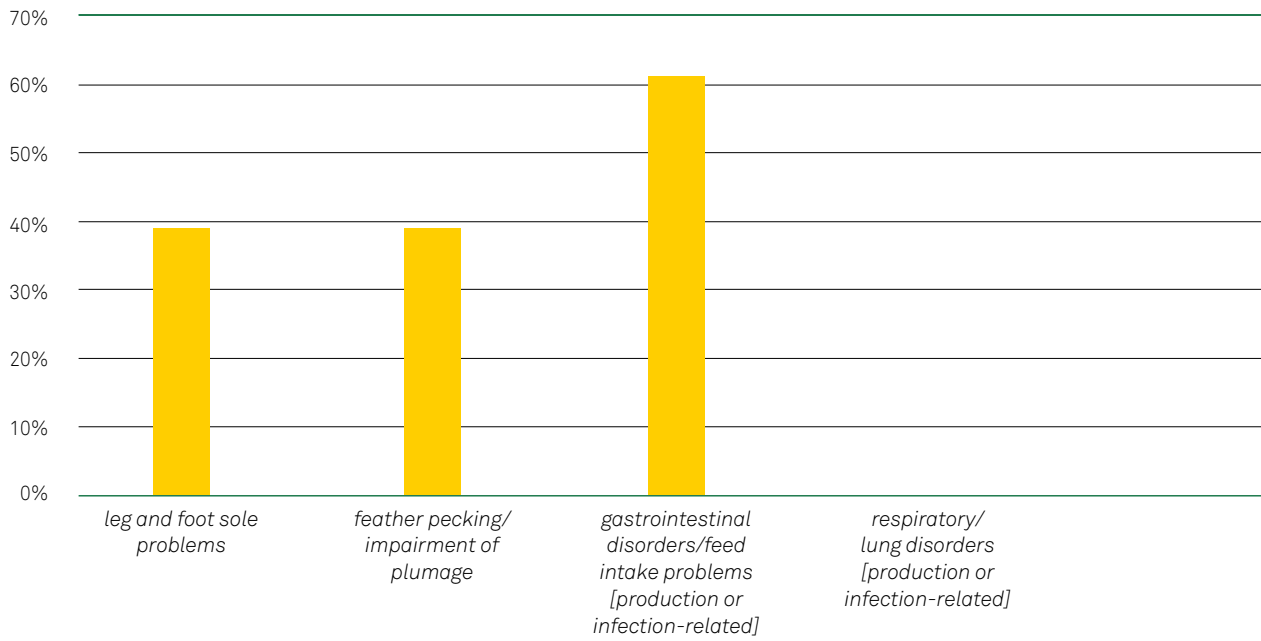
## Results of CSR R&D Scan for Agrifirm Products and Services in the Pig Sector.

Influence of Agrifirm Products/Services on Production and Infection-related Piglet, Sow and Meat Pig Animal Diseases, by type of Animal Health Problem



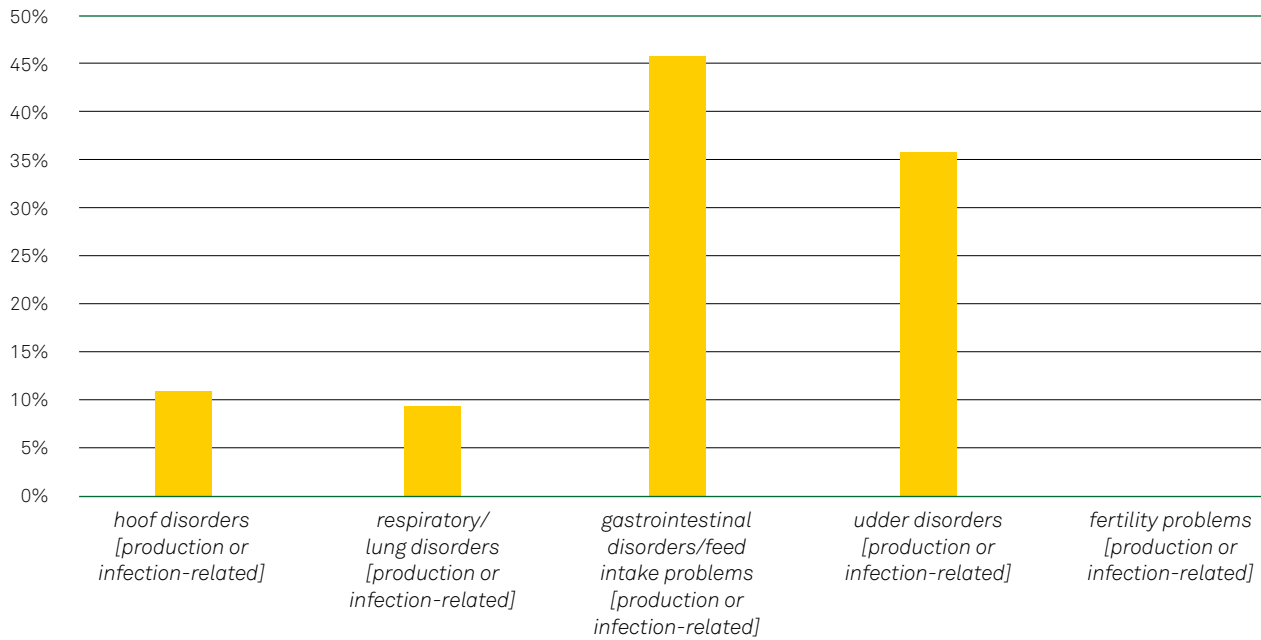
## Results of CSR R&D Scan for Agrifirm Products and Services in the Broiler Poultry Sector.

Influence of Agrifirm Products/Services on Production and Infection-related Broiler Poultry Animal Diseases, by type of Animal Health Problem



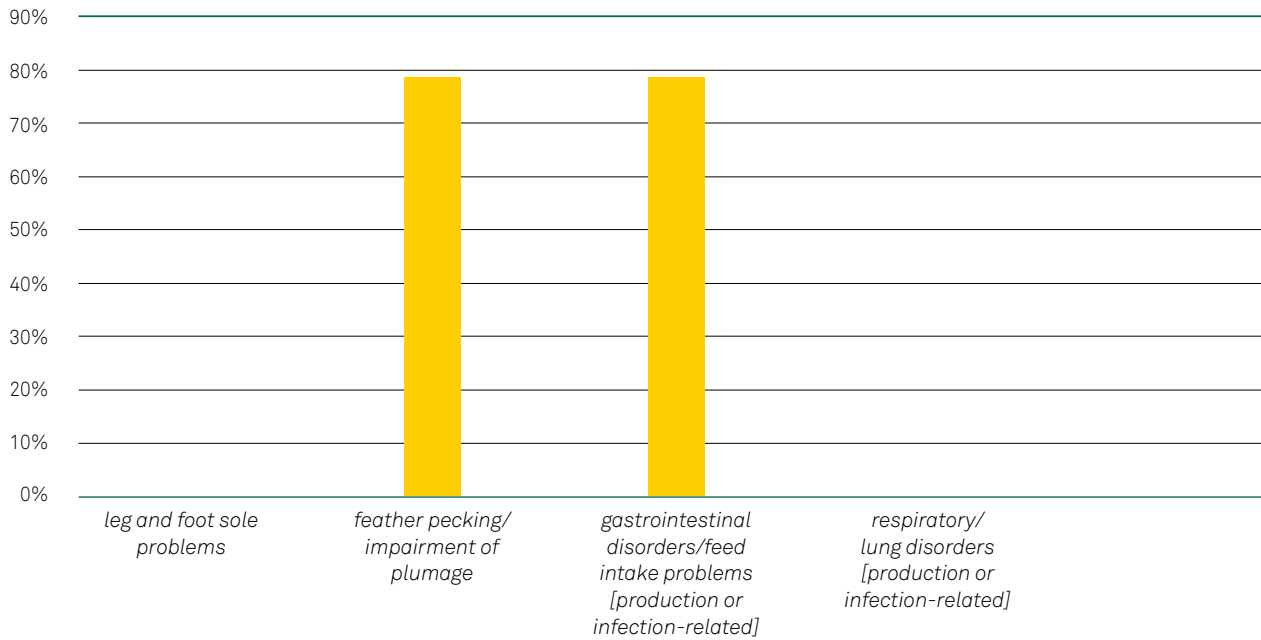
## Results of CSR R&D Scan for Agrifirm Products and Services in the Dairy Sector.

Influence of Agrifirm Products/Services on Production and Infection-related Dairy Cattle and Calf Animal Diseases, by type of Animal Health Problem



## Results of CSR R&D Scan for Agrifirm Products and Services in the Laying Hen Poultry Sector.

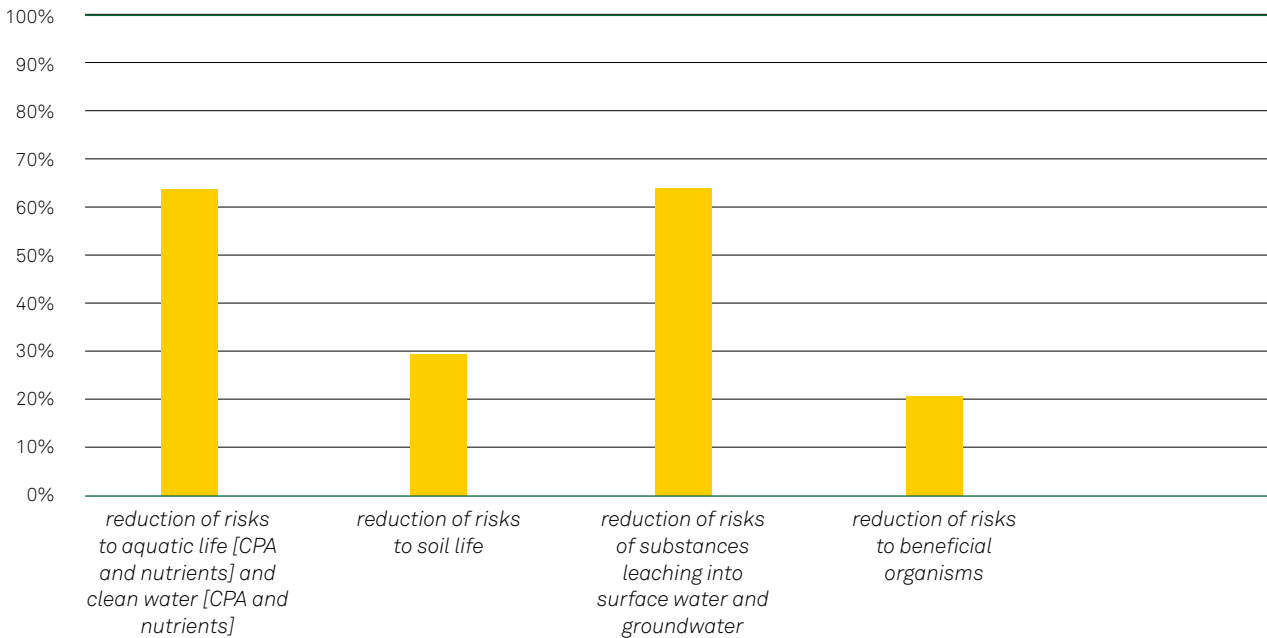
Influence of Agrifirm Products/Services on Production and Infection-related Laying Hen Poultry Animal Diseases, by type of Animal Health Problem



# Agrifirm Plant Results

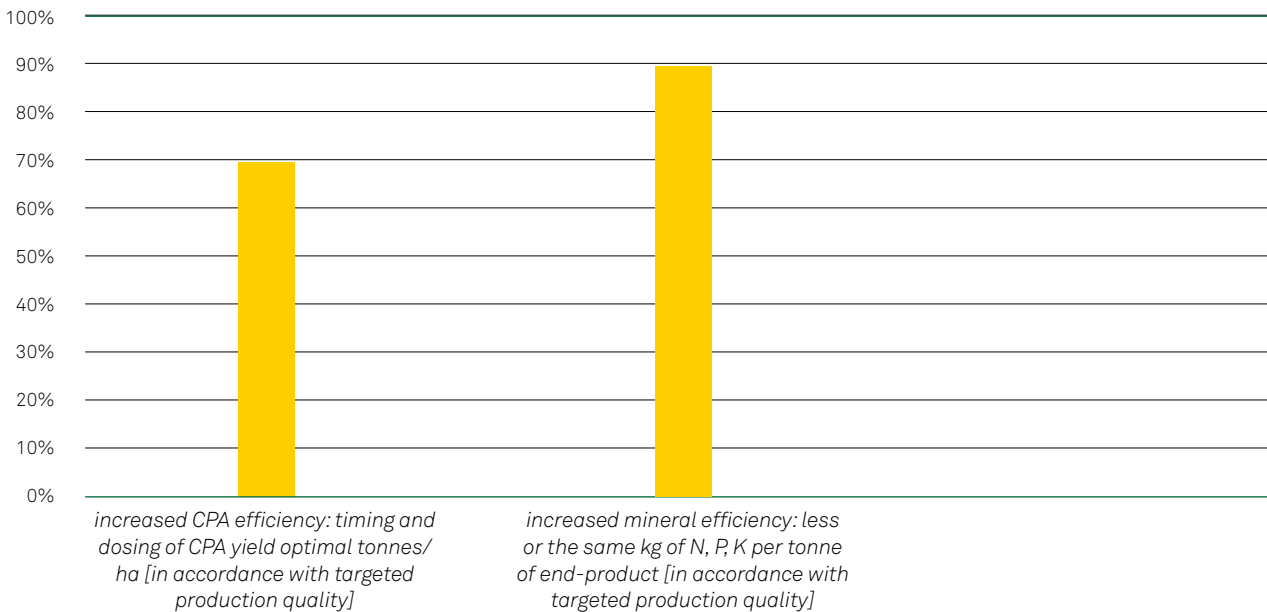
## Results of CSR R&D Scan for Agrifirm Products and Services Contributing to Healthy Soil, Plants and Animals.

Influence of Agrifirm Products/Services on the Growth of Healthy Crops and Healthy Soil with Minimal Disruption to Agricultural Ecosystems



## Results of CSR R&D Scan for Agrifirm Products and Services Contributing to Reducing the Environmental Footprint of Plant-based Products.

Influence of Agrifirm Products/Services on Reducing the Environmental Footprint of the Plant Sector



# 7. Contributing to a Sustainable Consumer Supply

*A focus on the environment and climate, and care for the welfare of humans and animals, are important social themes that affect the work of agricultural entrepreneurs. Chain cooperation enables them to produce foods efficiently and profitably, that help consumers eat more sustainably and healthier.*

By 2025, Agrifirm will be the main partner for chain parties in developing and testing new chain concepts.

In 2016, Agrifirm Plant initiated a partnership with Alpro for the purpose of further promoting sustainable soy cultivation in the Netherlands, because there is a demand for guaranteed non-genetically modified soy. Agrifirm is also endeavouring to realise a good price for sustainable milling wheat and brewing barley for growers.

### Regional Food Production

Agrifirm anticipates the growing attention focused on the minerals recycling loop and regional food systems. Regional food production was one of the themes of the farewell symposium for Ton Loman held on 22 September 2016. Over 100 representatives of chain parties, social and farmers' organisations engaged in an open dialogue on whether regional production is better for the environment or not.

Anne-Marie Spierings, Member of the Provincial Executive of the Province of Noord-Brabant, indicated that Province's aim is to develop an agricultural food sector that as much as possible closes recycling loops. According to her, this should be done on the smallest possible scale. "Consumers have more confidence in products from their own region. We don't want to build a fence around Brabant, but we would like to close the recycling loop at the North-western European level. On that scale it is also possible for farmers to link an earnings model to this," said Spierings.

Martin Scholten, General Manager Animal Sciences Group at the Wageningen University & Research Centre warned that recycling loops should not be closed regionally at any cost. "Continue to produce where you can do this most efficiently. Cultivating soy in the Netherlands is an appealing thought, but it is better to first optimise the production of existing crops. This could make a greater contribution to the supply of protein," said Scholten.





Agrifirm supports the closing of recycling loops. However, that does not automatically mean opting for the regional production of raw materials. Agrifirm considers economic, ecological and social motives, and where possible opts for closed recycling loops. By definition these are not local or regional, but are determined on the basis of the Recycling Loop Test. Agrifirm is one of the initiators of this test.

**Soy from Domestic Soil**

The Dutch climate is not the best for cultivating soy. That can be done far more efficiently elsewhere. Yet, there is good reason to try cultivating it in the Netherlands as well: market demand. There appears to be a demand for soy that is not genetically modified. Its Dutch origin makes it even more interesting to buyers. To acquire relevant knowledge about cultivating, harvesting and processing soy, we organised an instructive study trip to Elzas France for 9 soy growers, in September 2016.

Together with CAH Vilentum, Agrifirm is investigating the feasibility of using Dutch soy in poultry feed, without making any concessions to animal health and feed efficiency. Soy from Dutch soil is currently primarily used for products for human consumption, such as soy drinks. This produces maximum value for growers.

**Chain Cooperation Pays**

Agrifirm Plant also cooperates with partners in the barley chain. For example, Agrifirm Plant is the only



Slowfeed in practice

party in the Netherlands with a solid position in the brewing barley chain in which we cooperate with large and small parties in the production of beer and whiskey. This way we realise a good premium for growers of sustainable brewing barley and buyers have greater assurance about the quality and availability of their raw materials.

In the poultry sector, Agrifirm intensively cooperated with breeding organisations, farms, veterinarians and slaughter houses in developing the Goed Nest Kip concept. To respond to chain requirements and the feed requirements of broilers in the Goed Nest Kip and free-range concept, Agrifirm developed the SLOWFEED concept. By frequently assessing growth, feed conversion, losses, the use of antibiotics and the balance sheet, Agrifirm provides tailored advice and can help the poultry farmer

achieve good returns. In just one year, the Goed Nest Kip has already achieved a greater market volume than the free range chicken. Since 2016, the customary chicken on the shelves of the major Dutch retailers has been replaced with the Goed Nest Kip.

In September 2016, the North Netherlands Fertile Recycling Loop was initiated, in which Agrifirm is also involved. On the basis of the Recycling Loop Management Guide, participating dairy farmers and other agricultural entrepreneurs in the provinces of Groningen, Friesland and Drenthe are working on the agricultural recycling loop on a project-oriented basis. The objective is to make better use of minerals at the farm level, reduce the discharge of phosphate and nitrogen into the environment and improve soil fertility. The project's initial study groups were initiated at the end of 2016. In

eighteen study groups, divided across region and soil type, 180 participants are learning how to apply the Recycling Loop Management Guide to their own farm and are developing a farm improvement plan with their own objectives and measures.

**Low-impact Agents**

Agrifirm consistently makes an effort to green its crop protection approach. For example, we offer growers the opportunity of controlling pests such as aphids, poultry mites and pear leaf flea beetles using natural means such as predator insects. We have developed the PredaSect House for this purpose. It is a perfect hiding and wintering place for earwigs, lady beetles and lacewings that can perfectly be integrated into any orchard.

Another appealing example is the planting of African marigolds in arable fields. The roots of these plants secrete a substance that almost completely eliminates a number of the most harmful nematodes (Pra-

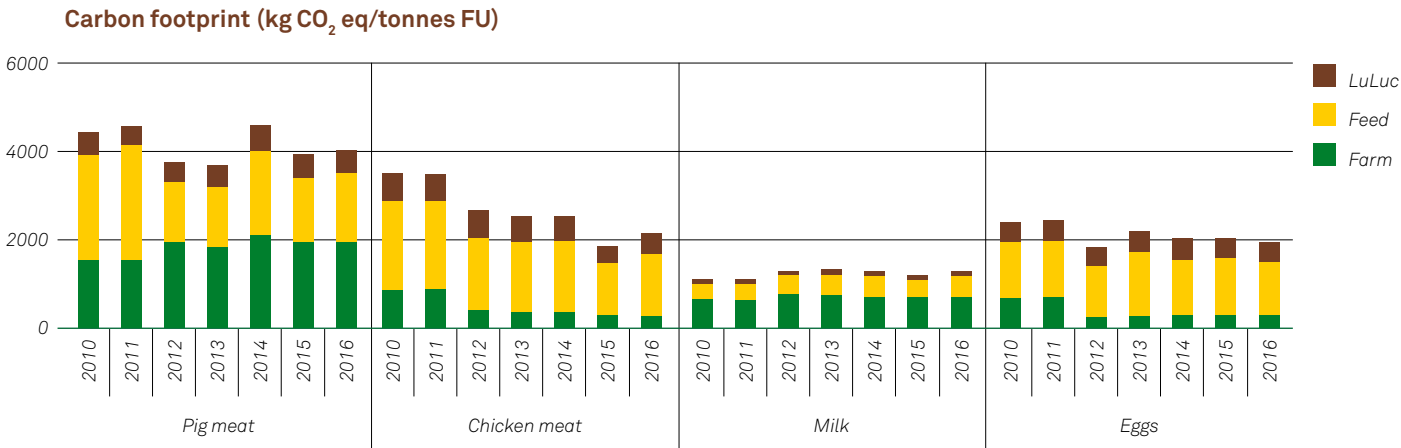
tylenchus penetrans). When used as a green fertiliser prior to cultivation, the marigolds improve the soil due to their organic substance and thus ensure that weeds have less of a chance to grow.

**Carbon Footprinting**

Carbon footprinting is the calculation of the total greenhouse gas emissions of a product throughout its entire lifespan. Since 2014, Agrifirm has been working within the Federation of European Compound Feed Manufacturers (FEFAC) on a Product Environmental Footprinting (PEF) study supported by the European Commission. Pilots are conducted within the study to develop a collective methodology designed to determine the CO<sub>2</sub> footprint at the product level. In addition, Agrifirm is consulting the Food and Agriculture Organization (FAO) and the American animal feed industry concerning the creation of a global database, the Global Feed LCI database, with background data for calculating the CO<sub>2</sub> footprint.

**The CO<sub>2</sub> Footprint of Milk, Meat and Eggs**

The graph below illustrates the CO<sub>2</sub>-equivalent number of kilogrammes of emissions released during the production of a kilogramme of milk, meat or eggs produced using Agrifirm Feed's feeds. By reducing the amount of corn in animal feed, the carbon footprint of eggs declined somewhat in comparison to 2015. The carbon footprint of chicken meat and milk rose somewhat due to the use of more corn in the animal feed and because the impact of corn on the carbon footprint has increased. The database that Agrifirm uses to calculate the CO<sub>2</sub> footprint does not include any data concerning Central and Eastern European countries. Corn from these countries is therefore assigned to Brazil, which is the least favourable option for calculating the carbon footprint. The carbon footprint of pig meat increased in comparison to 2015. This is due to the increased carbon footprint of barley used in the animal feed for pigs.



## 8. Employees, the Foundation for Success

*Expert and motivated employees are indispensable to the success of a company. Agrifirm attracts the best possible employees with excellent terms and conditions of employment, and excellent training and career development opportunities. Characteristics include a pleasant company culture and appealing company objectives with corporate social responsibility as a key theme. This way we achieve the highest possible result.*

To remain successful, Agrifirm aims to be the employer of choice in the field of agricultural products by 2020.

By 2020, Agrifirm will have visibly developed leadership as one of the key success factors for our company. This manifests itself in various ways within the company, for example by means of a high rate of internal promotions. Agrifirm creates a stimulating environment for its employees and invests in sound terms and conditions of employment, training opportunities and career advancement opportunities.

To measure our progress, we will formulate indicators and the associated result objectives in SMART terms and prepare action plans. In 2016, we adopted three indicators for measuring progress and incorporated them in the PDCA cycle (Plan, Do, Check, Act). These indicators are as follows:

- decline in the undesirable turnover of employees;
- improvement in the results of the employee satisfaction survey;

- minimum number of training hours per employee per year.

### Agrifirm Academy

Agrifirm wants to take good care of its employees. We do this by providing excellent terms and conditions of employment, as well as by investing in good training opportunities. In 2015, Agrifirm's Human Resources (HR) department introduced the Agrifirm Academy: a combination of existing training courses supplemented with new training opportunities. In 2016, 64 employees completed the Time Management training. This theme was highlighted as a priority in a previous Agrifirm employee satisfaction survey. Cattle consultants were very positive about the results of this training and Time Management now is a standard component of their training programme. It helps them to combine a day with various customer visits as effectively as possible with, for example, answering e-mails or other administrative tasks. Another popular training course is Effective Communication, which was comple-

ted by 60 employees. In the future, we will be investigating how to provide access to the Agrifirm Academy to employees abroad and possibly to our members and customers as well.

### Accidents and Absence due to Illness

The frequency of accidents (expressed in hours of absence for all FTEs per year) declined from 4.8 in 2015 to 2.7 in 2016. The number of serious incidents in 2015 resulted in a relatively high number of days of absence. In 2016, the number of incidents was lower, resulting in fewer days of absence. The number of incidents fluctuates over the years. In 2015, Agrifirm refined its safety policy. By 2020 we will be able to analyse whether the refined policy has resulted in a structural decline in the number of incidents on the work floor.

The average duration of absence caused by an accident declined from 2.4 working days in 2015 to 2.3 working days in 2016. The absenteeism rate due to an accident declined from

### Agrifirm Ambition Day

On 1 April 2016, Agrifirm organised the Agrifirm Ambition Day. During this day, young people were introduced to Agrifirm as employer and were given the opportunity to speak with Agrifirm employees in various positions. This gave them a good overview of the various positions existing within Agrifirm and enabled them to explore a possible match with their training and education, and interests.



## 'Ambitious and Results-oriented'

*"As a cattle specialist I advise dairy farmers in optimising their production and animal welfare at the most efficient possible costs. I have been performing this function since 2015. Prior to this I worked for a reseller of roughage in the Province of Noord-Holland. That was my first employer after I completed my studies in 2014 at the Stoas University of Applied Sciences in Wageningen and the CAH University of Applied Sciences in Dronten. During my contacts with dairy farmers, it struck me how positive they were about Agrifirm. This confirmed my image of Agrifirm as a solid and major player in animal feeds. I wanted to experience this for myself and I therefore registered for the Ambition Day. Here I was introduced to Agrifirm across its full breadth: Nuscience, Feed and Plant. What struck me in particular during the Ambition Day is that Agrifirm, in every area in which it operates, wants to play a leading role.*

*Agrifirm is ambitious, innovative and results-oriented. For example, I also work together with teams of specialists in robotisation and nutrition in order to use this combined knowledge to further improve dairy farmers' financial and sustainability performance. I advise dairy farmers on how to improve animal welfare as a means of increasing the dairy cattle's lifespan. Each week I speak with an average of 25 to 30 dairy farmers. In providing my advice I benefit from the innovations emerging from Agrifirm. In addition, I have full opportunity to further develop myself and take training courses. I am in control of this and I am able to determine the areas in which I want to improve. I can design my own training program using the courses available at the Agrifirm Academy and by taking external courses. For the purpose of realising my own and Agrifirm's ambitions."*

### Johan de Leede

Cattle Specialist Agrifirm Feed





0.6% to 0.0%. Agrifirm's average absence due to illness rate was 3.32% in 2016.

Employee Training

Agrifirm aims to be the best company in its market. The way in which employees exercise their responsibilities is very important in this respect.

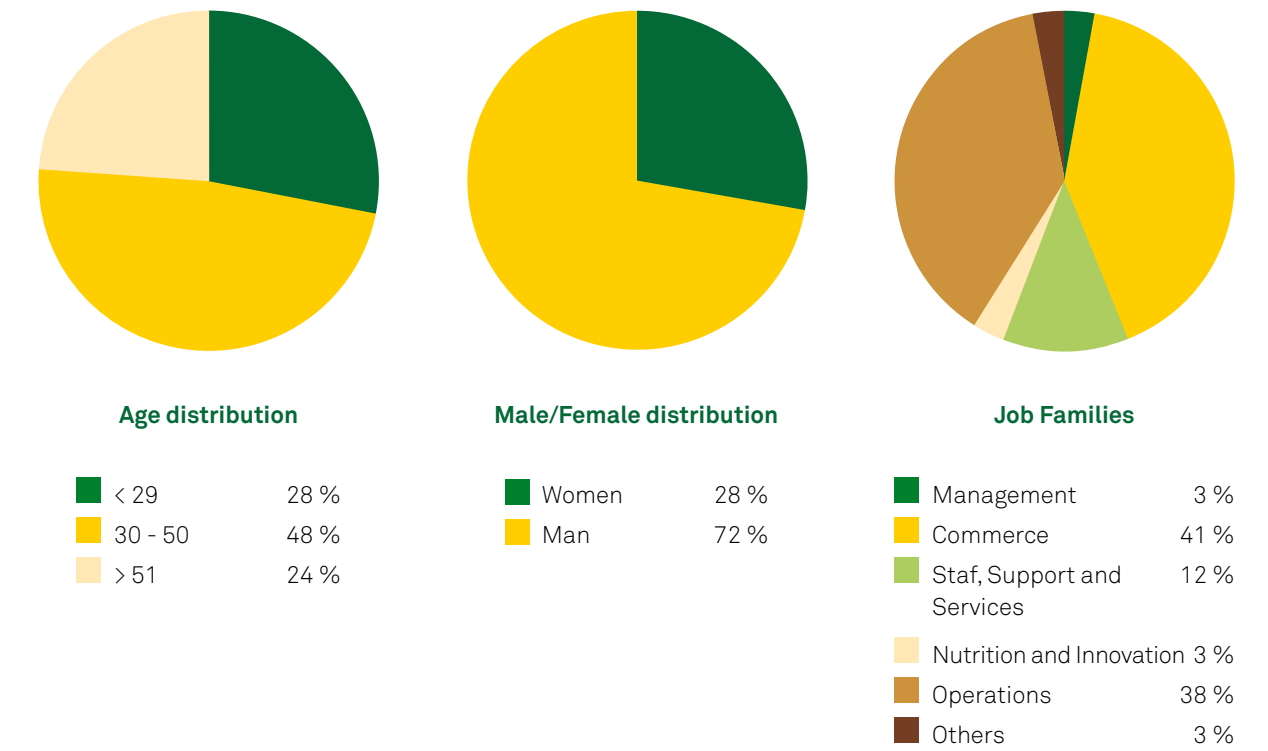
In addition to leadership training, Agrifirm invests in (further) training, for example relating to working conditions, safety and leadership. The way training is provided has changed due to the creation of the Agrifirm Academy. This also affects the training costs. In 2016, several training courses were cancelled at Agrifirm

Feed due to cutbacks within the organisation. Agrifirm Plant joined the general Agrifirm Academy in 2016. Better insight into training costs may have resulted in a decline.

	Number of Incidents		Absence due to Illness as a % of Employees		Training costs per Employee (€)	
	2016	2015	2016	2015	2016	2015
Agrifirm Group (excl. participating interests)	0	0	2,9	2,0	901	803
Member companies						
Agrifirm Feed	0	3	4,5	3,7	575	1.023
Agrifirm Plant	1	1	2,9	2,8	723	864
Compound Feed Europe						
Agrifirm Belgium	0	2	1,7	2,8	654	1.536
Agrifirm Deutschland	0	3	5,3	3,3	473	340
Agrifirm Polska	1	2	1,9	2,9	379	590
Agrifirm Magyarország	3	3	2,5	1,3	395	449
BV Oldambt	1	0	6,8	8,3	423	74
Specialties						
Nuscience Group	4	8	2,2	1,8	110	164
Co-products						
Agrifirm Co-products	0	2	2,6	2,1	589	358
Knowledge & Innovation Cluster						
NutriControl	5	3	5,4	3,2	427	681
Agrifirm Exlan	0	3	0,6	1,8	266	504
AIC	0		1,5		1.750	
Service Companies						
Agrifirm Winkel BV	0	0	3,8	4,3	14	77
Agri Retail	0	0	2,9	5,0	355	638

Composition of Personnel Population

Total number of FTEs in 2016: 3,089  
Total number of employees in 2016: 3,476



Distribution of Total Number of Employees (FTEs)

To simplify reporting, effective from 2016, the distribution of Agrifirm's employees is shown by activity in the Annual Financial Report and in the CSR Report.

Overzicht aantal medewerkers per activiteit (in FTE ultimo boekjaar)	2016	2015
Feed Netherlands	510	552
Arable Farming + Horticulture Netherlands	234	238
Feed + Arable Farming Europe	412	433
Co-products	118	103
Premix & Concentrates	1,105	1,021
Mechanisation	-	202
Retail	446	419
Other activities	264	211
Total number of FTEs	3,089	3,179

Number of FTEs working in the Netherlands at financial year-end: 1,606 (2015: 1,754).



# Looking to the Future

Trends, such as reducing the use of antibiotics and CO<sub>2</sub> emissions, and sustainable raw materials are gaining interest throughout the world. At the same time there are increased opportunities for applying Big Data and sensor technology within the agricultural sector. The trend towards regionalisation in Europe is persisting. This not only concerns regional raw materials, but regional products as well. A German product for German supermarkets and a British product for British supermarkets. It will be a major challenge to realise high productivity within acceptable environmental and social limits.

Agrifirm’s CSR policy is highly consistent with these trends and we will continue to pursue this policy in 2017. In this regard, we will focus on our sustainable procurement policy and on translating strategic objectives into an operational framework and specific objectives for each business unit. Specifically this means that we will start off by conducting new regional risk analyses for the three main raw materials; sunflower kernel meal, barley and beet pulp. We will share the findings with suppliers and discuss them with regional stakeholders in at least two countries of cultivation. Other spearheads in 2017 include evaluating the effect of measures designed to improve energy efficiency at production sites and initiating SMART quarterly reporting relating to reducing transport fuel consumption and emissions. The CSR Dashboard on page 14 contains an overview of all the result objectives for 2017.

# Colophon

Agrifirm's Corporate Sustainability Report 2016 is a publication of the Agrifirm Group and is available in digital format on Agrifirm’s website.

**Editorial Committee**

CSR Department (Agrifirm Group), Communication Department Agrifirm Group, HR Department and Finance Agrifirm Group, Agrifirm Innovation Centre, R&D Plant

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May 2017





# Appendix 1: KPIs Relating to the Organisation

## List of memberships

<b>Agrifirm Group BV</b>	<b>Nuscience Group</b>
FEFAC, Sustainability Taskforce & PEFCR Technical Secretary	GMP+ / FCA
FEFAC Praesidium	ACS
Project Management, Sustainable Soy Chain Transition Foundation	Contracts
Dairy Campus Innovation Committee	Cochon de Bretagne
SAI (Sustainable Agriculture Initiative)	Viande de Porc
ILO Convention 87 and 98 – The right to collective bargaining	A+ Futter
ILO Convention 29 and 105 – No forced labour	QS
ILO Convention 138 and 182 – No child labour	AMCRA
ILO Convention 100 and 111 – Equal rights and opportunities	Bemefa
ILO Convention 155 – Safety for employees	Pig Veterinaries Survey Group
Round Table Responsible Soy (RTRS)	WPSA
Round Table Sustainable Palm Oil (RSPO)	European Pig Producers Platform
	Nevedi Premixes Consultation Platform
	Fefana
	Frana
	Animal Feed Research and Animal Feed Product Board
<b>Agrifirm Feed / AIC</b>	Advisory Committee
Nevedi/LTO Feed Track Agreement	IPVS
Nevedi membership, committees and Long-term Agreements	Schothorst AGM
FEFAC Quality Feed & Animal Nutrition	AniMedica AGM
GMP+ QS	Agrivaknet
GMP+ FRA	ISO 9001
Trustfeed Secure Feed	Socially Responsible Soy Contracts
HACCP	A+ Futter
SKAL	Industrial Zone Cooperation (Drongen)
VLOG	
Antibiotic-Free	<b>Agrifirm Belgium</b>
Dioxin Agreement	Bemefa Member
QM-Milch	FCA (former GMP)
Schothorst Foundation Board, Animal Committee Cattle, Animal Committee Pigs, Animal Committee Poultry	Ovocom
Feed4Foodure Top Sectors Project	HACCP
Netherlands Animal Feed Research Association	SKAL
Expert Committee Rikilt Risk System Raw Materials and Lab Methods	VLOG
CVB	
WPSA	<b>Agrifirm Germany</b>
	QS
	KAT

QM-Milch	Mineral Fertilisers Federation (MMF)
VLOG	Plantum, Cereals Section, Cultivation Trade License
Participant in Landliebe Programme	NAK
Socially Responsible Soy Contract	Veldleeuwerik Foundation
Certified Organic Trade (Ingredients and Feed)	Dutch Carrot Group
DVT Supplier Audit Team	LLTB
	ZLTO
	Netrecycle
<b>Agrifirm Poland</b>	Mineral Fertilisers Distribution
GMP	Arable Farming Sector Organisation
ISO9001:2008	Top Sectors Chain Consultation Platform
	Sound Corn Farming in Drenthe Steering Group
<b>Agrifirm Hungary</b>	NIBEM (Brewing Barley Advisory Committee)
ISO 22000:2005 (Kaba, Győr)	GP Groot
HACCP (Kaba, Győr)	
ISO 14001:2005 (Kaba)	<b>Oldambt</b>
Global GAP (Kaba, Győr)	Dutch Fodder Legumes Driers Association
GMP+B1 (Kaba, Győr)	CIDE (European Association of Fodder Legumes Driers)
OSI Food Solutions (Kaba, Győr)	Copa-Cogeca, Fodder Legumes Working Group
Hungarian Grain and Feed Association	Dutch Federation of Agricultural and Horticultural Organisations (LTO)
Netherlands-Hungarian Chamber of Commerce	ANOG
	GMP+
<b>Agrifirm Co-products</b>	SKAL
GMP+	SecureFeed
KAT	QS
SecureFeed	ETS
FEFAC Working Group Former Feedstuffs on behalf of VIDO	
International Expert Committee of GMP+ (on behalf of OPNV), Transport	<b>Agrifirm Exlan</b>
International Expert Committee of GMP+ (on behalf of OPNV), Feed Safety Database	Cumela Sectie mestdistributie
OPNV	Bureau Mestafzet
Valoria (French - Former Foodstuffs Syndicate)	Stuurgroep Projectbureau Lokale Mestverwerking
SNIA (French - Compound Feed Companies Syndicate)	Nevedi werkgroepen Kringloopwijzer
OPVODI (Consultative Platform on Wet Animal Feeds within Nevedi)	Gebruikerswerkgroep Kringloopwijzer
	Gebruikersgroep Database Kringloopwijzer
	RAV-commissie
<b>Agrifirm Plant</b>	
Precision Agriculture Programme Steering Group	
SGGV Crop Protection Agents Steering Group	
Top Sector Consultation Body: Soil Programme	
Nemadecide	
Geonema	
Agrodis	

<b>NutriControl</b>
NEN Food Committee
NEN Animal Feed Committee
NEN Halal Food committee
Fenelab Agrofood Committee
Fenelab Accreditation Committee
VRS
GMP+ Reliability of Laboratory Testing Steering Group
<b>Agrifirm Winkel</b>
Flowering Platform
RND
CDG
SKAL
BPN
Dibevo
NMF/NMD
Fagrovet
Netherlands Horticultural Sector
VDDN

Overview of key themes that emerged in consultation with stakeholders

Animal Health and Animal Welfare	Minerals (efficiency, manure processing, recycling loops)	Co-products	Climate (greenhouse gas emissions)	Sustainable Raw Materials (local raw materials, sustainable soy, sustainable procurement)	Local Residents near Production/ Processing Plants – Safety and Liveability	Food Safety
Agrifirm group (excl. participating interests)						
-	Manure processing ForFarmers, De Heus, ZLTO	-	LEAP partnership FAO, FEFAC, AFIA  F4F FeedPrint WUR, F4F partners	Promoting awareness of European soy, WUR, ILVO  Partnership of Provinces and private partners for marketing Dutch soy  F4F alternative proteins, WUR, F4F partners  Sustainable soy chain transition: Sustainable Dairy Chain, Environmental Certificate and Nevedi Sustainable Soy Agreement  Involvement in FEFAC Roadmap to Sustainable Soy	-	Secure Feed



Animal Health and Animal Welfare	Minerals (efficiency, manure processing, recycling loops)	Co-products	Climate (greenhouse gas emissions)	Sustainable Raw Materials (local raw materials, sustainable soy, sustainable procurement)	Local Residents near Production/ Processing Plants – Safety and Liveability	Food Safety
Agrifirm Feed BV / AIC						
<i>Smart Dairy Farming Partnership</i>	<i>Smart Dairy Farming Partnership</i>	<i>Strategic partnership with Vitens</i>	<i>Agreements with carriers about more EURO 6 vehicles</i>	<i>Procurement of sustainable raw materials: Sustainable soy meal, sustainable soy oil from RTRS, ProTerra, Amaggi, etc.</i>	-	<i>Nevedi/Hisfa, etc.</i>
<i>WUR + private partners: re-search into intestinal health of piglets</i>	<i>Partnership Belgium (Fancorn and University of Leuven) for precision feeding</i>					
<i>Employees and zoonosis: Nevedi/ Occupational Health &amp; Safety (Arbo) Catalogue</i>	<i>Continuation of Manure Investment Fund</i>			<i>Conditions for sustainable fish products (GMP FRA)</i>		
	<i>Recycling Loop Management Guide Partnership</i>					
	<i>Cooperation with scientific and private partners on better availability of amino acids</i>					
Nuscience NV						
<i>Partnership with Free University Berlin: The effect of functional feed ingredients on animal health.</i>	-	<i>Partnership with private parties: Conversion of co-products into energy and functional feed ingredients.</i>	-	<i>Partnership with private parties: Enhancement of raw materials through fermentation.</i>	-	<i>University of Antwerp: In-vitro Platform</i>
<i>Precision livestock farming with private partners</i>				<i>Research into insect protein (with private parties)</i>		<i>Controlling the infection and transmission of Salmonella – Heidelberg in Brazil (partner: customer in Brazil)</i>

Animal Health and Animal Welfare	Minerals (efficiency, manure processing, recycling loops)	Co-products	Climate (greenhouse gas emissions)	Sustainable Raw Materials (local raw materials, sustainable soy, sustainable procurement)	Local Residents near Production/ Processing Plants – Safety and Liveability	Food Safety
Agrifirm Deutschland						
-	-	-	-	Procurement of sustainable raw materials: mostly non-GM broiler meat	-	-
Agrifirm Polska						
-	-	-	-	-	-	-
Agrifirm Hungary						
-	-	-	-	Regionally sourced soy bean meal for specific customers	-	-
				Limestone flour and granulated limestone for feed purposes, sourced from local mines in a continuous supply		
				Sourcing of corn, wheat, barley from local farmers – all non-GMO		
				Oils and feed meal (as secondary oil extraction products) produced locally		
Agrifirm Co-products BV						
-	-	-	-	-	-	-

Animal Health and Animal Welfare	Minerals (efficiency, manure processing, recycling loops)	Co-products	Climate (greenhouse gas emissions)	Sustainable Raw Materials (local raw materials, sustainable soy, sustainable procurement)	Local Residents near Production/ Processing Plants – Safety and Liveability	Food Safety
<b>Feed Belgium</b>						
<i>IWT trial with precision feeding of meat pigs (partners: Fancom KU Leuven AIC)</i>	-	-	-	<i>Procurement of sustainable soy via Bemefa</i>	-	-
<b>BV Oldambt</b>						
-	-	-	-	<i>Grey Harrier Foundation Partnership</i>	-	-
<b>Agrifirm Exlan BV</b>						
-	-	-	-	-	-	-
<b>NutriControl BV</b>						
-	-	-	-	-	-	-
<b>Agrifirm Winkel BV</b>						
-	-	-	-	-	-	-

Sustainable Raw Materials (recycling, crops, certifications)	Biodiversity (plant health, soil health, flowers & bees)	Transport	Customer and Consumer Health and Safety (safety at work, advice)
<b>Agrifirm Plant</b>			
<i>From-the-farm collection of empty CPA barrels by Netrecycling, Van Gansewinkel Group</i>	<i>Veldleeuwerik Foundation partnership</i>	-	-
	<i>Continuation of Sustainable Brewing Barley Chain (Heineken &amp; Holland Malt)</i>		
	<i>Partnership with Koopmans on sustainable milling wheat.</i>		
	<i>Soil Resetting Public-Private Partnership (biological soil remediation)</i>		
	<i>Partnership with Agrometium (Veris scan): soil analysis in combination with task cards for growers</i>		
	<i>Nefyto sector organisation partnership for using toolbox cards for limiting the emission caused by crop protection agents (CPA)</i>		

## Services and Sales Markets

### The various Agrifirm companies offer the following services:

- Agrifirm Plant: cultivation advice to members in the arable farming sector; organic arable farming, flower bulbs, fruit growers, contract workers, public landscaping and open-field vegetable crops.
- Agrifirm Feed: advice and assistance to members engaged in cattle farming, dairy farming, and in meat cattle, goat, horse, poultry and pig livestock farming.
- NutriControl: laboratory research relating to nutritional issues in the feed and food industry (analytical chemistry, instrumental analysis, microbiology, BSE monitoring and customer-specific services relating to quality assurance).
- Abemec: subsidiary of the Agrimec Group, and supplier of agricultural mechanisation systems; also provides services relating to maintenance and 24-hour break-down service.
- Agrifirm Exlan: services relating to farm development, and minerals and manure legislation.
- Bonda: supplies high-quality cattle and pig feeds that comply with all conditions for the optimal, efficient and safe use of wet and dry animal feeds.

### These services are provided by the following companies.

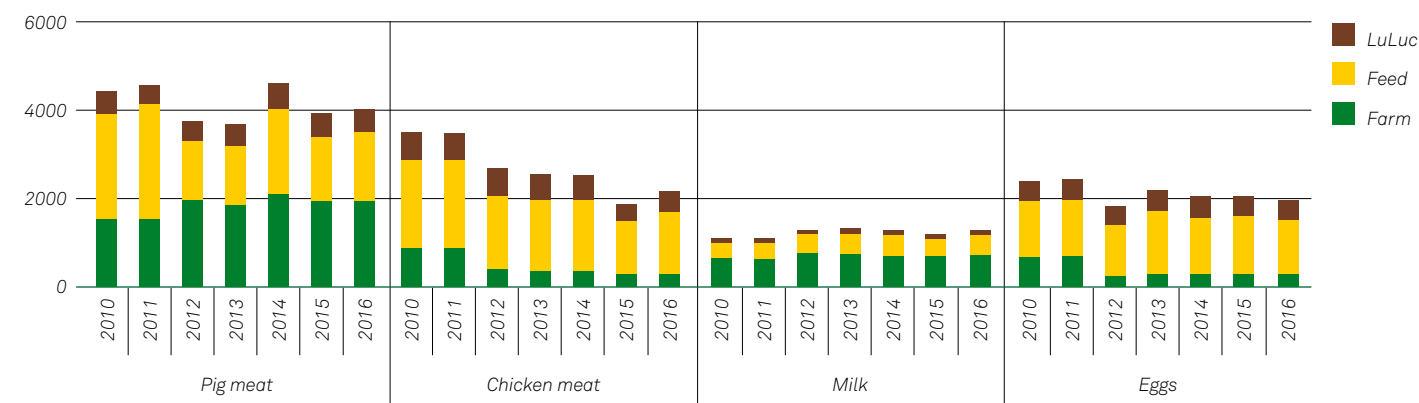
- Agrifirm Group
- Agrifirm Feed
- Agrifirm Plant
- Nuscience Group
- Agrifirm Co-products
- Feed Europa: Agrifirm Belgium, Agrifirm Deutschland, Agrifirm Polska, Agrifirm Magyarország
- BV Oldambt
- Agrifirm Exlan
- NutriControl
- Agrifirm Winkel BV
- Agri Retail

The Agrifirm companies are established in the Netherlands, Belgium, Germany, France, the United Kingdom, Spain, Hungary, Poland, Ukraine, Serbia, Romania, Bulgaria, Uruguay, Russia, Brazil and China.



# Appendix 2: KPIs Relating to the Environment

Carbon footprint (kg CO<sub>2</sub> eq/kg product)



The carbon footprint is the sum of the greenhouse gas emissions during the life cycle of the animal products based on the unit kg CO<sub>2</sub>-equivalent/kg functional unit (FU) (milk, meat or eggs). The results of the CO<sub>2</sub> emissions are based on the emission factors published by Stimular (on the basis of CE Delf 2010) and the Climate Neutral Group (on the basis of the NL Agency, 2012 CO<sub>2</sub> Performance Ladder). Conclusions and explanations from the 2016 report are as follows:

- By reducing the amount of corn in animal feed, the carbon footprint of eggs declined somewhat in comparison to 2015.
- The carbon footprint of chicken meat and milk rose somewhat due to the use of more corn in the animal feed and because the impact of corn on the carbon footprint has increased. The calculation of the CO<sub>2</sub> footprint does not include any data concerning Central and Eastern European countries. Corn from these countries is therefore assigned to Brazil, which is less favourable in terms of the carbon footprint.
- The carbon footprint of pig meat increased in comparison to 2015. This is due to the increased carbon footprint of barley used in the animal feed for pigs.

## Feedmiles and land use

Efficient production results in a smaller environmental footprint. Efficient use of raw materials ensures that more can be produced with less. This is why Agrifirm annually calculates the transport mileage ('feed miles') and the area of agricultural land ('land use') required for the production of a kilogramme of milk, pig meat, poultry meat and eggs. This calculation includes all links in the chain, from the cultivation of raw materials for animal feeds up to and including the products produced by livestock farmers.

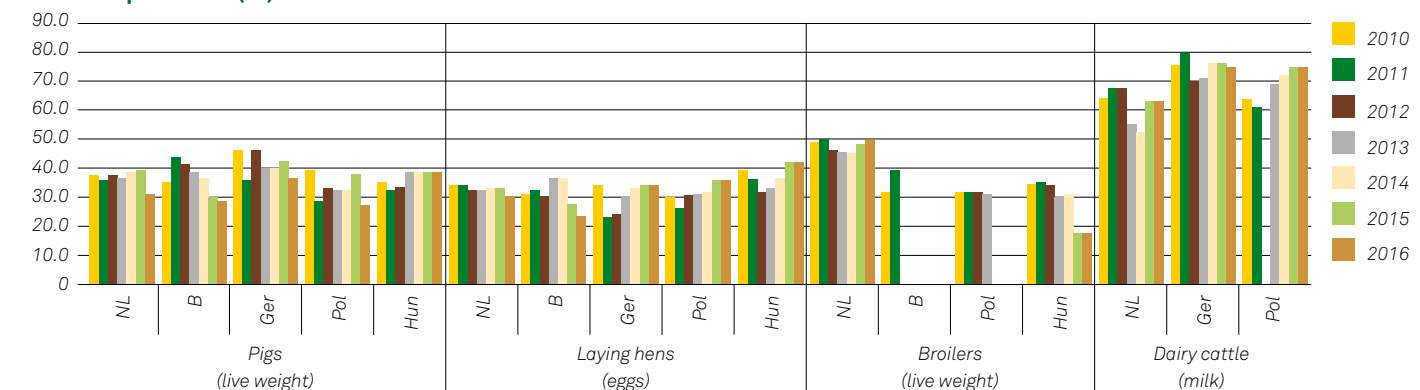
Land use	2016	2015	Feedmiles	2016	2015
Pig meat	5.8	3.4	Pig meat	4.2	2.98
Eggs	5.7	2.6	Eggs	5.3	3.16
Poultry Meat	3.3	2.6	Poultry Meat	3.7	3.11
Milk	0.95	0.88			

## Reuse of Residual Products from the Food Industry

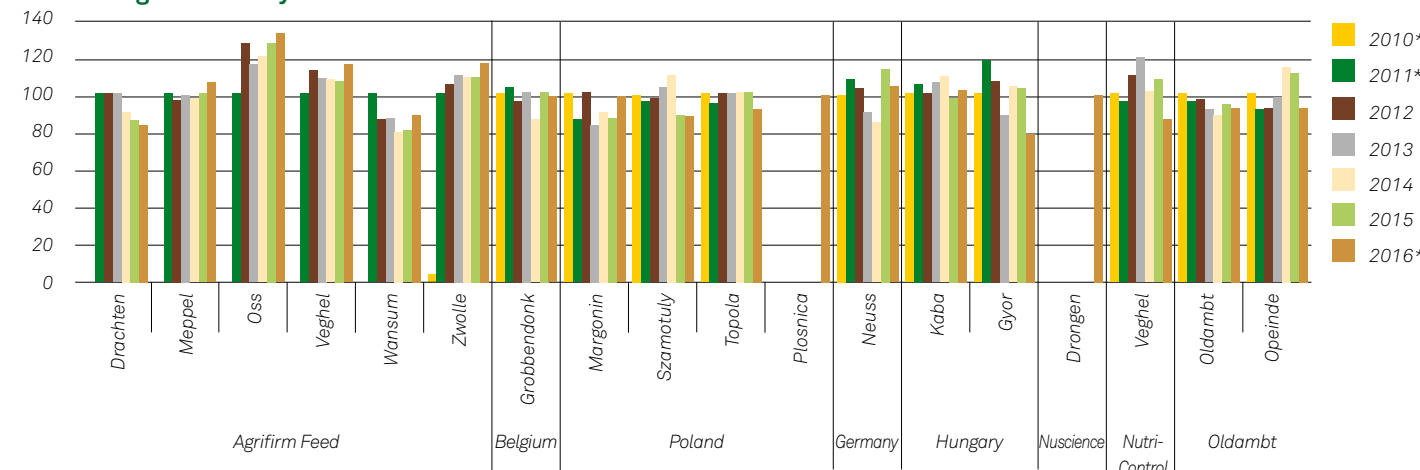
The co-products from the food industry, provided they are mixed to create a well-balanced composition, are extremely well suited as raw material for animal feeds. Co-products are left over as part of the production of, for example, bread, cookies, margarine, beer and sugar. Residual products constitute a different stream from the food industry that are re-used by Bonda for animal feeds. The share of co-products in the feeds for dairy cattle, pigs and laying hens was lower in 2016 compared to the previous year. The largest decline was in the use of co-products for pig feed. The decline applies to all production countries. In the Netherlands, the share of semolina and wheat gluten products declined somewhat. The decline in the use of co-products in the Netherlands can probably be traced back to the fact that in 2016 there was a more active focus on phosphorous content. Semolina products have a higher phosphorous content and as such are more likely to be eliminated from recipes at an earlier stage when there is a more active focus on phosphorous content. By contrast, the share of co-products in the feed for broiler chicks rose somewhat.

Percentage per Animal Type	2016	2015
Dairy cattle	58.3	64.8
Pigs	31.6	39.6
Laying hens	25.8	31.6
Broilers	41.5	40.9

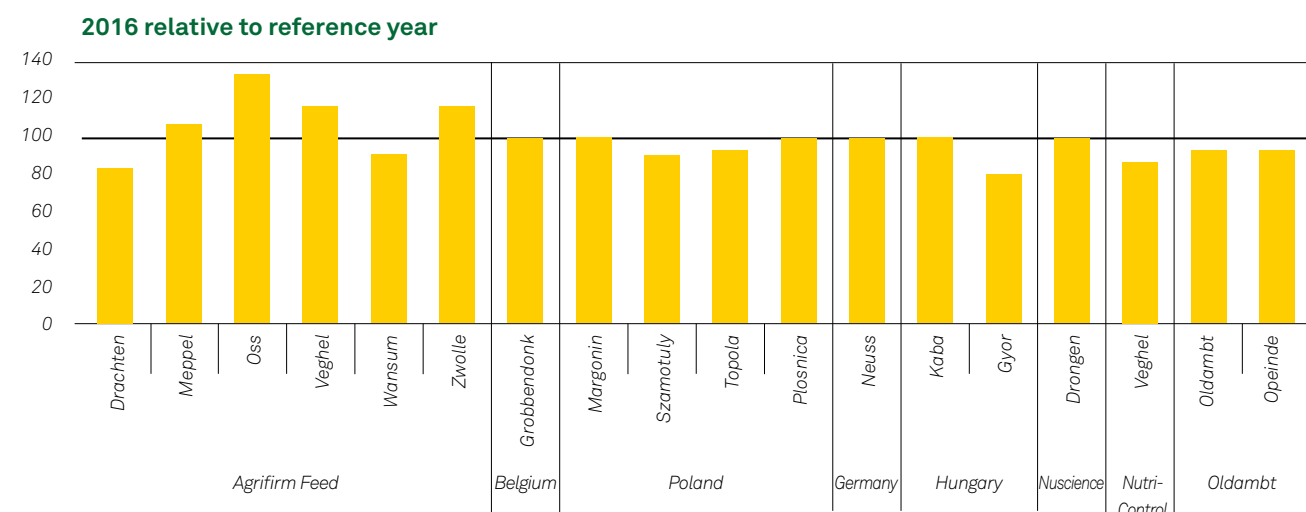
## Co-products (%)



## Energie efficiency index



\* Reference year  
\*\* Agrifirm Feed reference year  
\*\*\* New Drongen and Plosnica plants reference year

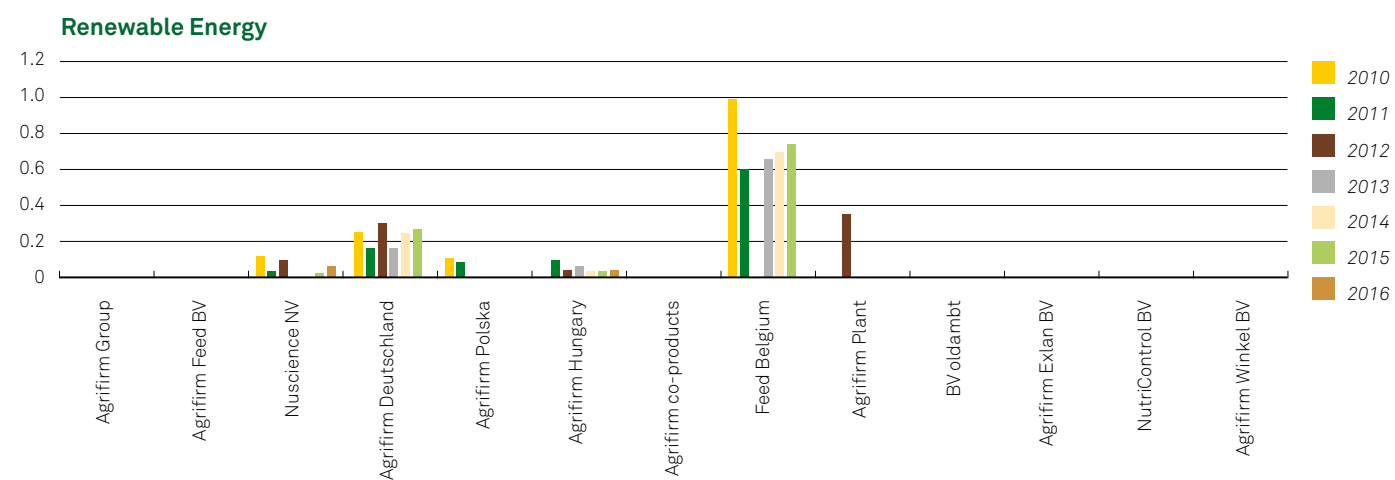


2011 is the designated reference year for Agrifirm Feed. 2010 is the reference year for other companies.

The energy efficiency index has deteriorated at a number of Dutch sites due to investments made in improving pellet quality. In spite of this explanation, our assessment is that the energy efficiency index (EEI) is an obstinate indicator. The method used to calculate the EEI of each production site has been developed on the basis of the concept that a plant always makes optimal use of its production capacity. To determine the EEI, 2010 was designated as the benchmark year for most companies. The difficulty of this approach is that, due to technical or operational changes in a plant focused on improving a product or production process, the basic assumptions change. In that case the EEI provides insufficient information to be able to put the energy efficiency-related efforts into a historical perspective. In 2017, Agrifirm will therefore make greater effort to provide insight into the targeted efficiency improvement measures, and where necessary refine and supplement these measures.

### Renewable Energy by Site

Increasing the share of renewable energy is a performance indicator for Agrifirm that we monitor on a yearly basis. Reducing the impact of our energy consumption is not a strategic objective, but simply a performance indicator that we monitor each year.



## Appendix 3: KPIs Relating to Employee Benefits and Human Rights

### Codes and Regulations

Agrifirm voluntarily abides by the Netherlands Corporate Governance Code. This code is mandatory for companies listed on the stock exchange and contains principles and provisions that regulate the relationship between the Executive Board, the Supervisory Board, shareholders and the General Meeting of Shareholders. In the case of Agrifirm, the code has been adapted so as to provide a proper fit with its cooperative character. Furthermore, the company has a Fair Business Practices code of conduct. This code of conduct is a guideline designed to promote conscious and ethical actions under all circumstances. For example in situations involving a conflict of interest or competitive methods. Employees who report abuse are protected by the Whistle-blowing Regulation. In 2016 there were no reports concerning corruption, discrimination or the violation of human rights submitted pursuant to these regulations. Agrifirm was not involved in any legal actions concerning anti-competitive behaviour or cartel formation.

### Collective Labour Agreements on Notice of Termination

In its collective agreements with employees working for Dutch companies under a temporary or permanent employment contract, Agrifirm applies a period of notice of up to a maximum of thirteen weeks for the employer and up to a maximum of six weeks for employees. This depends on the term of the employment contract and years of service.

### Participating in Sports at Agrifirm

In 2016, Agrifirm for the first time fielded two of its own teams of cyclists and a runner in the Big Challenge ‘Farmers against Cancer’. Together with other teams from the agricultural sector, fifteen Agrifirm employees on 2 June climbed the Alpe d’Huez to collect the maximum possible donation for the KWF cancer fund.

### Sponsorships

In total, the Dutch company Feed and Plant spent an amount of € 62,565 on gifts and donations. This amount was in part allocated to events (approx. € 25,000), and sector-related and local sponsorships (approx. € 30,000). In addition, a large amount was collected for the Big Challenge. Feed Belgium donated an amount to MS-Liga and Children’s Cancer. The Nuscience Group supported various initiatives, including the Belgian Fund for Young Traffic Victims, KiKa and Doctors without Borders. Agrifirm Co-products donated an amount of € 4,500 to various causes. Agrifirm Poland provided €1,600 to sponsor local youth organisations, and Agrifirm Magyarország and Nuscience sponsored various social initiatives in the amount of € 3,500 and € 8,511 respectively. Oldambt BV provided in-kind sponsorship for landscaping and biodiversity projects.



### **Employee Satisfaction**

In recent years, Agrifirm took major steps in achieving employee satisfaction and commitment. The 2013 employee satisfaction survey demonstrated a requirement for improved internal communications. This topic consequently is on the agenda of the team and work meetings of various subsidiaries. Agrifirm Feed and Agrifirm Winkel BV took steps to further improve leadership qualities in 2015 as well. In 2017, Agrifirm will conduct a new employee satisfaction survey (AEOS). The findings of the AEOS will first be discussed with the Group Board in mid-June 2017. The results will subsequently be presented to the companies and teams. Furthermore, discussions will take place to determine how Agrifirm can retain its areas of strength and how certain areas can be improved upon.

### **Investments in Local Infrastructure/Facilities**

Companies made the following investments in 2016:

- Agrifirm Exlan: The Young Entrepreneurs Development Programme (JOOP). The JOOP programme offers young entrepreneurs (up to approx. 35 years of age) an advisory process in which they are assisted in the development of their personality and their business. It provides for a unique combination of entrepreneur, enterprise and environment.
- Agrifirm Plant: An assessment is currently underway to determine whether Agrifirm Plant's current knowledge can be applied worldwide to improve the cultivation of crops. A letter of intent to enter into a partnership with a large potato starch farm in China was signed for this purpose in November 2016.

