



2016  
ANNUAL REPORT

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## Preface

Yes, we know. There is malpractice in the industry. From farms to slaughterhouses, all links in the production chain have been in the news during the past year. Animal welfare on the farm and during transport. Malpractice in slaughterhouses. Emissions from farms. Negative news that was not about us, but which nevertheless affects the image of the entire industry, including us. Such stories cause us to believe even more strongly in, in fact to be convinced of, the importance of the chain concept as we see it at KDV.

We believe that working in a chain organisation has never been more important. Because realising improvements can't be done alone, as a single farmer, slaughterhouse or retailer. If you want to improve, if you want to innovate in the sector, then you must work together. Firstly, because innovation requires major investments. These include, for example, the introduction of our electronic ear tags last year. These are an innovation that gives us the ultimate track & trace system for our meat.

Secondly, a chain offers the ability to exchange agreements and information across the entire process. As a single party, you have an insufficient picture of the total process. We can clearly see the benefit of this in the KDV Raw Materials List, which we have compiled as our customers (rightly) want to know what is fed to our pigs.

In addition, being a well-organised chain means we can be transparent. We are able to demonstrate that we're working hard towards an energy-neutral chain. We can show that we are taking steps towards reducing emissions and improving animal welfare. We understand that it's important to show and tell what we do, and to involve those around us in our projects. We do so by inviting people to our farms or slaughterhouse. By explaining how our monitoring systems work. By offering insights into what we do.

That's why I'm also happy that this annual report can once again explain what we have done during the past year. It was a year in which several of our commitments have become a reality. And also a year in which several commitments proved to be too ambitious for now. We have achieved a lot, but have also been unable to implement some things. And we want to be open about this.

Jaap de Wit jr.  
Chairman Sustainable Pork Value Chain Foundation

## 2

## Promises and results 2016

**Promise 1** Pork with Antibiotic-free Life Guarantee.

We are committed to sustainable pig farming. Our goal is continuous improvement in terms of the environment, animal welfare and taste. That's why we continue to reinvent ourselves. Sustainable Pork Value Chain (Keten Duurzaam Varkensvlees, KDV) set new, challenging goals for 2016. We describe the results we have achieved below.

### *What did KDV promise in 2016?*

1. Pork with Antibiotic-free Life Guarantee
2. Further development of taste and taste experience
3. Carcass balance in supermarkets
4. Sty of the future approved housing system
5. Better understanding of the complex causes of tail biting
6. A step closer to energy-neutral pig farming
7. KDV abroad

### *2.1 Pork with Antibiotic-free Life Guarantee (Antibioticvrij Leven Garantie)*

In recent years, KDV has devoted much effort to reducing antibiotic use in pig farming. We have made great progress in this regard. Many of our pig farmers use almost no antibiotics at all, and to improve this even further we have tightened the standards for antibiotic use in 2016 from 5 DDD\* to 4 DDD for meat pigs. From 8 DDD for sows and piglets to 4 DDD for sows and 16 DDD for weaned piglets. This standard was also achieved in 2016.

Because our farmers are able to maintain the health of their animals so effectively, it was decided to introduce pork from animals with an Antibiotic-free Life in 2016, with the KDV+ hallmark. Meat with this hallmark comes from pigs that are guaranteed never to have been treated with any type of antibiotic: pigs with an Antibiotic-free Life Guarantee.

#### *Monitoring and safeguarding the Antibiotic-free Life Guarantee*

Such a hallmark can only be introduced if you can really monitor and guarantee compliance with the Antibiotic-free Life claim. That's why KDV invested a great deal of time and energy in developing an effective monitoring process in 2016. There were two important questions in this process:

1. How to you tell animals that have and have not been treated apart?
2. How do you ensure you can demonstrate (from farm to shop floor) that the meat has not been treated?

We originally dealt with the first part, the guaranteed separation of untreated pigs, with a low-tech solution: an ear tag or a colour that would make the animals visually distinguishable. This helped us gain an understanding of the number of untreated animals. However, it also became clear to us that this manual way of working was too laborious and error-prone. And so we began searching for a high-tech solution. This research led to the RFID ear tag: an electronic ear tag with Radio Frequency Identification.

The second part of the monitoring process is the capacity to detect antibio-

DDD means: Dier Dag Dosering (Animal Daily Dosage). The animal daily dosage is a calculated value that indicates the number of days that an animal is treated with antibiotics annually. The animal daily dosage can be used to compare different companies' antibiotic use. More information: <http://www.autoriteitdiergezondheidsmiddelen.nl/>



**Antibiotic reduction results**

The results of the antibiotic project are good. The antibiotic use within the chain has now dropped to:

- 3,3 DDD for sows
- 3,1 DDD for meat pigs
- 8,5 DDD for weaned piglets.

Since 2015, the antibiotic use for the weaned piglets category has also been recorded separately.

tics in pork. We developed a method that allows spot testing of whether a pig has or has not been treated with any type of antibiotic at each stage of the process. This uses samples of hair, manure and urine, meat samples, kidneys and also drinking water. 250 samples were taken by KDV, of which 230 were actually examined. The research we carried out revealed that hair is the best medium for determining the extent to which animals have been treated.

For most types of antibiotic, manure and urine are also suitable media for determining whether animals have been treated. Depending on the time between the moment the antibiotic is administered and the moment the sample is taken, it is possible to determine the treatment. In addition, it is important to take account of contamination between treated and untreated animals.

RFID ear tags requires the farmer to register the purchase of antibiotics and records all treatments that are being carried out. There is a compliance for this registration. By sampling both in the pig farmers and in the slaughterhouse. This ensures that KDV can guarantee the untreated of the animals.

*Smart farming with RFID ear tags*

After a year of testing various ear tags, readers, chips and software packages, we had developed a system that can be deployed effectively on farms. The RFID ear tag was introduced at the end of 2016. With this electronic ear tag, farmers can regulate the health of their pigs even more effectively and safeguard the Antibiotic-free Life Guarantee.

The individual registration of pigs is made simpler and more efficient thanks to the RFID ear tag. From birth to slaughter, individual details are registered using the chip. At birth, the farmer registers the basic details for the pig: if the pig is a boar or a sow, details of its father and mother and the birth weight, if applicable. It is important that the farmers adds information, such as antibiotic use, up until slaughter. At the slaughterhouse, data on weight, muscle-fat thickness, meat quality, type, animal health and of course the ensuing financial results are added to the chip. This allows information on origin and genetics to be linked to the slaughter results. In 2016, twenty farmers started using this method of Smart Farming.



**Promise 2** Further development of taste and taste experience

## 2.2 Further development of taste and taste experience

The taste and quality of pork is becoming more and more important for customers, and thus also for KDV. KDV wishes to differentiate itself from the competition with great-tasting pork. In 2015, we began various projects focusing on taste. These projects were followed up in 2016.

### *Taste project 1: providing lucerne mix*

The feed given to pigs can influence the quality, taste and taste experience of the meat. This is one of the reasons why KDV began researching the effects of lucerne. Since November 2015, in partnership with Wageningen University, KDV has given lucerne to pigs on eighty farms. 2016 was the pilot year for the lucerne project. If the experiment proved that giving lucerne on a daily basis would have a positive impact on animal welfare and that it would be a good enrichment material, then the Better Life Hallmark Foundation (Stichting Beter Leven Keurmerk) would agree to the continuation of this after 2016.

Research by Wageningen University has shown that the pigs play with the lucerne on a daily basis and that it is a very good alternative enrichment material. The Dutch Society for the Protection of Animals (Dierenbescherming) also responded positively to the research, and we are proud to announce that the Society has officially approved the daily supply of lucerne as a distraction material.

The criteria for enrichment materials have been amended, and now state that lucerne may be administered by hand on a daily basis for all group sizes, provided that at least one type of permanent enrichment material is also provided.

### *Taste project 2: new breeds*

In 2015, KDV began a pilot project with new, great-tasting pig breeds, in partnership with Topigs Norsvin, a global player in pig genetics. The aim for 2016 was to have at least five different breeds assessed in the slaughterhouse, to determine which breeds KDV should continue with and how we can realise this.

In 2016, we carried out tests with two breeds. During the first tests, we discovered that the differences within a breed are greater than among the different breeds. To arrive at proper conclusions, longer-term research is needed. With the arrival of Smart Farming, we expect to gain a greater understanding of genetics.

*Taste project 3: Improving quality in the sustainable slaughterhouse*

To meet the demand for premium pork, for example butchers and restaurants, we have devoted even more attention to the selection of meat in the slaughterhouse. Our goal for 2016 was to create space at various places in the slaughter line for special inspectors to select our premium pigs. In 2016, we developed this project further and made preparations so that it could begin in 2017.

### 2.3 Carcass balance in supermarkets

From 1 January 2016, Dutch supermarkets have transitioned to the Pigs of Tomorrow (Varken van Morgen) with the 1-star Better Life (Beter Leven) hallmark from the Dutch Society for the Protection of Animals. This gave a new dimension to the partnership between slaughterhouses and supermarkets. Discussion and co-ordination of demand and availability of the various parts of the pig became essential. In 2016, this led to the need for a new way of looking at purchasing and sales, which steadily improved during the course of the year.

**Promise 3** Carcass balance in supermarkets

For the supermarkets, Pigs of Tomorrow at first applied only to fresh meat. However, this was not sufficient for the carcass balance (the use of the entire pig carcass). The supermarkets therefore also transitioned to the Better Life concept for cold meat products and some of their frozen products (such as snacks) during 2016.

In 2017, we expect that dog and cat food in the supermarkets will also feature the Better Life hallmark, which will further contribute to the carcass balance.





**Promise 4** Sty of the Future approved housing system

### *2.4 Sty of the Future approved housing system*

In 2015, the Sty of the Future in Valkenswaard was successfully launched, and in 2016 it continued operating successfully. This means there is now a good example situation, which is a condition for new construction at other locations. The goal is that the sustainable system built for this sty will be recognised as an approved housing system. For this to happen, at least three other farms must be able to demonstrate that the system works. To this end, two identical housing systems were to be built in 2016: one in Vinkel and one in Westelbeers. Due to the complex building permit and financing processes, construction of the new sties did not begin in 2016.

The solution to the building permit process is largely dependent on the provincial government. As a chain, we have sought dialogue with various provinces. This has resulted in partnerships with the provinces of North Brabant, Gelderland and Overijssel. In these provinces, we have analysed the five best practice companies as a business case. This gives a clear overview of the bottlenecks in the building permit process, which will allow us to resolve them in partnership with the provincial government. We expect to see the first results in 2017.

**Promise 5** Better understanding of the complex causes of tail biting

### *2.5 Better understanding of the complex causes of tail biting*

In 2015, the flagship farm in Valkenswaard began the 'long tails' project in partnership with Unilever's Knorr Sustainability Fund, with the aim of increasing our understanding of the complex causes of tail biting. In 2015, we could already conclude that tail biting in the pig sties and in the farrowing pen was under control on the flagship farm. The critical point that required attention in 2016 was the weaned-piglet sty.

An important change implemented there was to lengthen the weaning period by seven days. The piglets are heavier and more vital when they leave the mother, which has a positive impact on tail biting.

**Promise 6** A step closer to energy-neutral pig farming

### *2.6 A step closer to energy-neutral pig farming*

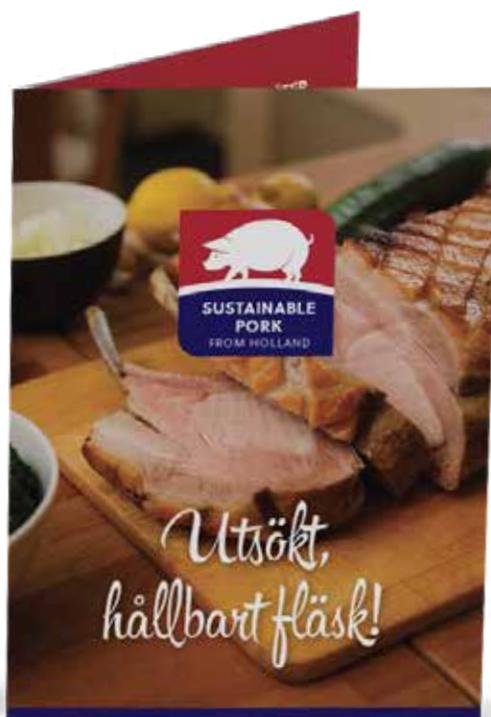
Generating electricity is one of the important steps in the energy neutralization of pig farming. One of the possibilities is the mono fermentor. This 'plug flow' fermentor extracts more methane from his manure, with which can be used to generate electricity. The monofermentor requires the use of fresh manure

each day, as this is still rich in biogas, in comparison to old manure from the manure cellar. The old manure is already 75% of the biogas emitted. At the Hoeve, our flagship farm, all preparations were made in 2016 for the installation of the monofermenter in 2017.

## Promise 7 KDV abroad

### 2.7 KDV abroad

Animal welfare, animal health and the environment are also becoming more and more important outside the Netherlands. This development represents an opportunity for KDV. An important step for our foreign activities was the design of an international logo and the translation of our website into English. Feel free to take a look at the website: [www.sustainable-pork.com](http://www.sustainable-pork.com). The first sales opportunities have also been explored, including in Scandinavia. A Swedish-language brochure has been developed. This has already resulted in the first sales in Sweden.





# 3

## Towards 2017

**Challenge 1** Pork with Antibiotic-free Life Guarantee

**Challenge 2** RFID ear tag - Smart farming

KDV has ten plans for 2017. In many areas, 2016 was a preparatory year, with the benefits being felt in 2017. For example, we expect a lot from our pork from pigs with an Antibiotic-free Life, from Smart Farming, and we will make concrete progress in our plans for energy-neutral pig farming.

### *Challenges for 2017*

#### *3.1 Pork with Antibiotic-free Life Guarantee*

In 2015 and 2016, KDV succeeded in producing pork with the Antibiotic-free Life Guarantee. In 2016, the focus was primarily on safeguarding this guarantee. Now this essential step in the process has been realised, we can start to scale it up.

Our goal is that at least eighty farms should participate in the Antibiotic-free Life programme by the end of 2017, and that meat with this guarantee should be available from a national retail organisation.

#### *3.2 RFID ear tag – Smart Farming*

At the end of 2016, twenty farmers had begun Smart Farming with the aid of RFID ear tags. In 2017, we want at least eighty farmers to start using these chips.

Working with RFID ear tags has laid the foundation for 'Smart Farming'. Farmers can register their pigs individually using the chips, and reliably select pigs that have not been treated with antibiotics.

But this is just the start of the possibilities that RFID ear tags offer. Working with the chips creates many more opportunities than simply monitoring antibiotic use, and registering origin and disease. Our challenge for the coming period is to switch from working with chips to real Smart Farming: from gathering data about origin, growth, feed and the health of the animal to providing information

for our farmers that will allow them to gain insight into their business practices. This must occur both at the individual farm level and at chain level.

Our challenge for the coming years is to translate the valuable data that the chips provide us with into meaningful information that will help our farmers manage and make decisions.

**Uitdaging 3** Reduction of salmonella infection

### 3.3 Reduction of salmonella infection

Salmonella infection is a risk to healthy animals. Because salmonella infection was officially included as a criterion in the KDV requirements for 2016, and because it is mentioned during the annual company visits, we see that our pig farmers are becoming more aware of salmonella control across the chain. Thanks to this awareness and targeted guidance by our farm coach Trudy van de Ven, the number of infections decreased significantly in 2016. At the start of the project in 2016, 29 KDV farms were still in category 3 (13%). At the end of phase 1 of our research, ten farms remained in category 3 (4.1%).

In addition, we discovered a smart method of detecting salmonella infection on farms in 2016. Our farm coach Trudy van de Ven carried out research on 15 farms. Where we previously carried out spot checks on blood samples to establish the presence of infection, we now do so with manure tests using the 'slipper method' familiar in the poultry industry. In contrast to taking blood samples, this method does not cause stress to the animals, as the samples can be collected from the sties very easily using slippers fitted around the shoes. In January 2017, the conclusions of this study will be known, allowing us to further develop our approach to preventing salmonella infection.



#### Challenge 4 KDV Raw Materials List

### 3.4 KDV Raw Materials List

Food safety is becoming a more and more important issue, both at home and internationally. Questions are also increasingly being asked about the feed given to pigs. Consumers also want to know more about what they eat, and about what the animals eat. Previously, we did not have a clear understanding of this.

KDV therefore decided to prepare a list of Raw Materials in Animal Feed (*Grondstoffenlijst Veevoer*). Or, in other words, a list of the raw materials approved by KDV for use in feed. With this list, we wish to achieve the following in the chain:

- Understanding of which raw materials are present in the feed, and thus also which are not present
- Improving food safety
- Improving animal health, in combination with the aim of further reducing antibiotic use
- Improving the taste of the meat
- Optimising mineral utilisation (manure treatment)

The KDV Raw Materials List makes it possible to communicate clearly and distinctly about what the animals eat. It is the next step in the right direction as we differentiate ourselves from the competition with great-tasting meat.

Our nutrition expert Mary-Ann Bongaerts will prepare the KDV Raw Materials List in consultation with our suppliers. The list will be complete by June 2017.

#### Challenge 5 First sustainable soya from Africa

### 3.5 First sustainable soya from Africa

When it comes to ensuring the sustainability of pork, the production of raw materials for animal feed is a critical factor. Soya is an important component of animal feed, and has a major impact on land use, farmers and their families in third-world countries. The chain has undertaken to purchase certificates in line with the standards of the international Round Table on Responsible Soy (RTRS) for the quantity of soya used by farmers to produce the Pigs of Tomorrow.

To contribute to the increased sustainability of soya production, KDV also signed an agreement with Solidaridad in 2015 to work together on sustainable soya production in North Mozambique.

For the future of farmers in North Mozambique, it is important to meet RTRS-standards. For these farmers, this means:

- Improving the efficiency of the production process
- Increasing yields per hectare of land
- Increasing the price per kilogram
- Improving the working conditions of farmers and employees
- Environmental improvements through increased environmental awareness and responsible use of pesticides

The partnership will enable Solidaridad to train 35 to 40 local farmers in better production methods, in collaboration with local partners such as agricultural technicians. These are 'leading farmers', who in turn enable us to support a total of 2,000 small-scale soya bean farmers in growing soya in a responsible way.

In addition to supporting farmers, the collaboration allows KDV and Solidaridad to ensure that soya farmers are officially certified. We will thus jointly ensure that, from 2017, RTRS certified soya is also produced in the continent of Africa.



**Challenge 6** Generating energy in the slaughterhouse

### 3.6 *Generating energy in the slaughterhouse*

KDV is working towards energy-neutral pig farming. Not just by increasing sustainability on farms, but also in the slaughterhouse. The sustainable Westfort slaughterhouse became operational in 2015. From the very first day, Westfort had its own water treatment facility. The plans to generate energy through fermentation on site were delayed until 2017 due to regulatory issues, which meant that electricity from the public grid was used in 2016.

From 2017, Westfort will begin using the fermentation system and will become largely self-sufficient. The contents of the intestines of slaughtered pigs are converted into methane gas in the fermentor. The methane gas is burned in a thermoelectric power plant, generating 500 kWh in green energy. From 2017, this will allow Westfort to generate 20% of its own electrical power and 80% of its own thermal power, i.e. its own heat.

What's more, the fermentation system processes the waste products into natural fertilisers. The waste products are dewatered, which means only 10% of the original volume remains in the form of dry matter, which is used as an alternative to fertiliser. We are thus able to reduce our transport of waste products by 90% from 2017.

**Challenge 7** Targeted consumer communication

### 3.7 *Targeted consumer communication*

*Improving taste experience*

*As well as health and environmental improvements, we also work together closely with the mobile BBQ team to help consumers experience the taste of pork. The team prepare delicious, mouthwatering recipes such as Pulled Pork and Spare Ribs for festivals and events.*

*The mobile BBQ team travels across the Netherlands with the largest barbecue spit in Europe! The spit is known as 'The Carnivore', because that's what this meat eater is. One hundred festival days have already been planned for 2017. With these appearances, we want to continue inspiring consumers with the various delicious tastes of KDV. Four pigs can be prepared simultaneously on the Carnivore, and around 80 shoulders for the delicious Pulled Pork*



and 120 kg of spare ribs. Pulled Pork is one of the specialities. It is made from pork neck that has been cooked for 16 hours. We achieve the unique smoky flavour, which everyone loves so much, by cooking everything over wood. This is willow or poplar wood, as it burns well. We have everything needed for the ultimate taste experience, including home-made sauces and fresh salads from Eline & Koert.

The Carnivore, the largest spit in Europe, is a very ambitious food truck. Kees Berkelaar, an experienced spit builder, had never before built such an enormous spit – 6.5 metres long. The meat turns in a drum. To rotate the four axles, he used a very special transmission: the planetary transmission. The Carnivore is also fitted with all conveniences: warm running water, a griddle, wood store, storage trunk, a smoking chamber and a fridge to keep the meat cool.

Check out [mobilebbq.nl](http://mobilebbq.nl) to see the upcoming events where the mobile BBQ team will be present.

#### Communication support

Letting customers taste meat from our sustainable pigs is one part of our communication strategy. Another important component is the opportunity to get to know the story behind it. We do so by helping both farmers and butchers tell our story. We provide clear communication packages that explain our story about animal welfare and the environment in a clear way. This includes new animations, improvement of the website and working continuously to improve our image. In 2017, this will also result in an improved website and communication material.

#### Westfort quality improvement

In 2017 we will introduce a new premium label specially for the butcher. Within this concept, our meat masters in the slaughterhouse select a pig that meets the wishes of the customer. By 2016 we have made all the preparations: the process within the slaughterhouse has been organized, the communication around the introduction has been set up. Our goal is to have this premium label stocked by ten butchers in 2017.

### Challenge 8 KDV abroad

#### 3.8 KDV abroad

In 2017, we want to bring meat from pigs with an Antibiotic-free Life Guarantee to the attention of our foreign customers. At present, we expect most interest to come from Scandinavia, North America and Asia. To arrive at a targeted plan of action, we will investigate which demand exists in which countries in 2017. This means we can begin targeted sales in 2018.

### Challenge 9 Sty of the future and energy-neutral pig farming

#### 3.9 Sty of the future and energy-neutral pig farming

In 2016, the Sty of the Future in Valkenswaard operated successfully. The goal was to build two more identical housing systems in Vinkel and Westelbeers in 2016, but problematic building permit and financing processes meant the construction of these sties did not begin in 2016.

Meanwhile, the regulations also changed during the past year. If the emissions from two areas in the reference sty are measured and comply with the standards, then two more approved locations are required for the recognition of the system, instead of three.

The emission measurements are being carried out by Wageningen University and will continue into 2017. In 2017, we expect to realise an 85% reduction in odours, particulate matter and ammonia emissions, which means the system

can be approved once the measurements have been completed.

#### *Daily manure removal and monofermenting*

In 2016, all necessary preparations were made for the installation of the monofermentor at the flagship farm in Valkenswaard. In 2017, the monofermentor can be installed. The fermentor will process 3,500 m<sup>3</sup> of pig manure and will produce around 140,000 m<sup>3</sup> of biogas. Cogeneration will allow this biogas to be used to produce sustainable heat and electricity. The plant will produce around 3,000,000 MJ of sustainable energy annually, which will bring us another step closer to energy-neutral farming in 2017.

#### *Five other farms with new housing system*

In 2017, we will begin preparations at five farms (in Brabant, Gelderland and Overijssel) that were best practice farms in 2016, to permit daily manure removal in combination with monofermenting and on-farm manure processing. The business plans have already been written, and in 2017 we will work hard to obtain the necessary permits and funding. This will allow us to begin construction in 2018.

### Challenge 10 Long tails

#### *3.10 Long tails*

The long tails project will remain an important area of attention in 2017. In 2015 and 2016, we gained the first insights into the possibilities and achieved results with small numbers of pigs. In 2017, the De Hoeve flagship farm will prepare to deliver larger numbers of undocked pigs. To this end, we will reconstruct the sties of the weaned piglets to improve their excretory behaviour.

In addition to the sty modifications, we will also begin researching feed modifications in 2017. In partnership with our nutrition expert, we will carry out experiments with feed that should give the animals a greater feeling of satisfaction, and investigate whether this also helps them become calmer.





## Sustainable Pork Value Chain Foundation

The Sustainable Pork Value Chain Foundation (Stichting Keten Duurzaam Varkensvlees) is a cooperative venture between Dutch pig farmers, slaughterhouses, wholesalers, butchers, cold meat producers, retailers and caterers.

### 4.1 Mission

Our foundation's mission is energy-neutral pig farming, and healthy, great-tasting meat on the table. To us, sustainability means focusing on animal welfare and the environment. This approach sets us apart from 'single issue' initiatives that only cover one subject.

To achieve this mission, we impose requirements on our partners. However, we also help and facilitate them in complying with the stringent animal welfare and environmental standards. We do this by proactively encouraging and facilitating developments in farming. Together with the farmers, we bring innovations into their farms that they would not have been able to implement on their own. We examine where there's room for improvement, test new ideas, and together put our backs into our mission.

We also see it as our mission to enable awareness among consumers... awareness of the sustainable choices out there, and of the delicious taste of pork. And by bringing consumers, chefs and butchers together, to introduce them to these wonderful products. We don't do all this for profit – we do it because we believe in it.

### 4.2 KDV Foundation Board

The KDV Foundation was founded by Jaap de Wit jr. (Westfort Inkoop), Hans Verhoeven (De Hoeve BV), Piet Lunenburg (Westfort) and Egbert Kruiswijk (Westfort). All four have a background in the pork sector and each has their own expertise in improving the industry's sustainability.



#### Chairman

##### **Jaap de Wit jr.**

Jaap de Wit jr. is responsible for purchasing the pigs. He is third in a line of Jaap de Wits who have been involved in the livestock trade. In 1995, his father Jaap de Wit sr. founded Inkoop Oudewater BV. This company became responsible for purchasing for Lunenburg Vlees BV, and later also for Egbert Kruiswijk Vleesproducten. After completing his studies in communication, Jaap jr. worked on the stock market for three years as a market maker. In 2003, the inevitable occurred: this Jaap also started working at Inkoop Oudewater and so ended up in the pork sector after all. He is now responsible for purchasing, and is also chairman of the KDV Foundation thanks to his expertise in marketing and communication.



#### Members

##### **Hans Verhoeven**

Hans Verhoeven is a pig farmer based in Valkenswaard and one of the founders of KDV. In 1997, Hans established KDV together with Mark van den Eijnden. Hans and Mark now together form the limited company De Hoeve BV. This company is responsible for the certification, innovation and development of KDV requirements. In addition, Hans' farm also operates as the KDV flagship farm. All innovations and developments are first tested here before being rolled out at all pig farms in the chain.



### **Piet Lunenburg**

Piet Lunenburg is the managing director of Westfort. After his HEAO studies in Business Economics, he worked in the ICT sector for ten years and in the meat industry for six years at his brothers' company. Within this family business, he was primarily responsible for automation and ICT.



### **Egbert Kruiswijk**

Egbert Kruiswijk is the commercial director of Westfort. In 1986, Egbert began working as a wholesale butcher on his father's farm in Loenen aan de Vecht, where he also grew up. After attending agricultural college in his youth, Egbert finally chose to work in the meat industry. He attended the school of butchery in Utrecht and worked for four years in a large butcher shop in Breukelen, before finally ending up in the meat wholesale trade. Due to his background and training, he has a great affinity with the artisanal side of the business, and as such specialises in supplying butchers and supermarkets in the Netherlands, as well as the production of various high-quality cold meat products.

## *4.3 Advisory Board*

After the foundation was set up, an Advisory Board was appointed, and part of its remit is to ensure that KDV focuses on the needs of consumers, companies and the industry. The Advisory Board critically evaluates our innovations and contributes ideas. To this end, members of the Advisory Board meet twice a year. This means we are always proactively aligning ourselves with current and future developments.

The members of our Advisory Board are:

- Jaap de Wit Sr. (Westfort Vleesproducten)
- Gert van der Bijl (Stichting Solidaridad)
- Lenie Klein Holkenborg (Independent Chairwoman)
- Henk Jans (Society and Health doctor)
- Ad Romme (farmer)
- Ad van den Tillaart (livestock trade)
- Eline Poels (Superunie)
- Mark van den Eijnden (De Hoeve – secretary)

### **Jaap de Wit Sr. // Westfort Vleesproducten**

Jaap de Wit sr. is the spokesman for the new organisation Westfort Vleesproducten. He founded Inkoop Oudewater BV in 1995 and became responsible for the purchasing for Lunenburg Vlees BV and later also for Egbert Kruiswijk Vleesproducten. From the beginning of 1988 until the end of 1994, he was responsible for the purchase of pigs for Goedhart Vlees BV, a slaughterhouse in Hilversum.



After secondary school, Jaap de Wit sr. first worked at his father's company, which dealt in machinery as well as in livestock. In 1974 he chose to continue in the livestock trade as an independent trader, with an emphasis on trading in pigs, where he remained until the founding of Inkoop Oudewater BV, which is now part of Westfort Vleesproducten.

### **Gert van de Bijl // Solidaridad**

Gert van der Bijl has been the international co-ordinator of the Solidaridad soya programme since 2009. He is responsible for the Solidaridad Soya Programme with projects aimed at improving the sustainability of soya production in China, India, Africa and South America. He is also responsible for market development and collaboration with companies in the soya chain, and is a member of the board of the Round Table on Responsible Soy (RTRS). Gert graduated as a development economist from Wageningen University. He subsequently worked for the Dutch Agricultural Youth Contact (Nederlands Agrarisch Jongeren Kontakt, NAJK), Centre for Agriculture & Environment (Centrum voor



Landbouw & Milieu, CLM) and the Dutch Ministry of Agriculture.



**Lenie Klein Holkenborg** // *Independent Chairwoman*

Lenie Klein Holkenborg studied Business and Social Geography at Radboud University Nijmegen. After her studies, she began working at the Ministry of Agriculture, Nature and Food Quality (LNV) in 1992. Lenie was later head of the agricultural department at the Milieukeur environmental quality label, where she was responsible for drawing up various schedules of requirements for increasing the sustainability of production processes. She is now self-employed. She advises and supports companies in taking steps towards greater sustainability.



**Henk Jans** // *Society and Health doctor*

Henk Jans has joined our Advisory Board in 2015. His background makes him a valuable addition to the board. From 1986 to 2010, Henk was content manager of the Health, Environment and Safety department of the Municipal Health Services of Brabant and Zeeland. He worked as a specialist doctor in the field of environment and health, as well as accidents and emergencies with hazardous substances.

He has extensive experience in the role of environmental health doctor:

- In the field of risk assessment for a variety of small and large-scale environmental incidents.
- In co-ordinating environmental health problems and collaborating with a large number of organisations (both administrative and official in regular care and escalated care).
- In communicating with the population.

For the last eight years, as an expert doctor, Henk has been very actively involved with the development of intensive livestock farming at the Municipal Health Services of Brabant and the province of North Brabant. In addition, Henk taught chemistry for eight years and has run a large number of courses, lectures and presentations for staff of GHOR (regional medical emergency organizations), environmental health experts and students (higher vocational and university education) during the past 25 years.



**Ad Romme** // *Farmer*

Ad Romme is a pig farmer in IJsselstein and has been involved with KDV since the very beginning (1998). He has 4,400 meat pigs on his farm. In the time that pork began to be the subject of negative news, it became increasingly clear to him that you could do little about this as an individual pig farmer, and that collective action was necessary. Romme: "By being part of KDV, I stay alert and I work on the continuity of my company. England has led the way with the production of sustainable pork, and you see that almost everyone in the Netherlands is now also on board. The market is changing and the chain is contributing to this."



**Ad van de Tillaart** // *Livestock trader*

Ad van den Tillaart has been the owner of Varkenshandel Van de Tillaart since 1988, and is based in Zijtaart in Brabant. He trades in pigs, sows and piglets. His wife Willemien and his son Stijn also work alongside him in the family business. The company has been affiliated with KDV since 2007. Ad chose to work together with KDV because he believes in our vision and is right behind it. He believes that topics such as energy neutrality, welfare and animal health should become an integral part of pig farming. Ad van den Tillaart is a member of the Advisory Board because he wants to represent farmers and traders, so

that their opinions are taken into account in the ongoing development of the chain.



**Eline Poels** // *Superunie*

Eline has worked as a Sustainable Trade Co-ordinator at Superunie since 2010. Increasing the sustainability of the company's own brand and fresh products purchased by the association for 13 different Dutch retailers is her priority. Superunie wants to make progress not just with pork, but with all their own-brand products. This includes toothbrushes, fruit, vegetables and wine, to name just a few. After studying International Relations at the University of Amsterdam, she began working for the development organisation ICCO, first for a half year in Mozambique, and thereafter for three years in the Netherlands at the Sustainable Economic Development department. There she saw how farmers and producers at the start of various international value chains worked and the challenges they face.



**Mark van den Eijnden** // *De Hoeve – secretary*

secretary Mark van den Eijnden began his studies at the Agricultural College (*Landbouwhogeschool*) in Wageningen in 1976. In 1984, he founded the first regional development agency for agrotechnology. He sold this company in 2005. Mark is one of the founders of KDV. He established KDV together with Hans Verhoeven in 1995. Within the chain, he is responsible for certification and innovation on farms. And this means he does what he loves the most: searching for new solutions and new ways of working that are not immediately obvious. His motto is: work together with an open mind. He has already succeeded in realising many innovations at KDV

#### 4.4. *Independent certification*

In their management systems, all KDV farmers record all kinds of details about animal welfare and the environment, such as data on energy consumption and antibiotic use. KDV has access to the farmers' management systems and, based on the figures from these systems, every year KDV evaluates whether the farmers are still compliant with its strict standards. In addition, coaches from the chain visit the farmers annually to discuss the results and, where necessary, offer support. The farmers are certified by the independent certification body CGD BV. It conducts an entry check on new partners and visits existing partners at random.

##### **Monitoring and certification on the farm**

Alle KDV-boeren houden in hun managementsystemen gegevens bij op het gebied van dierenwelzijn en milieu (bijvoorbeeld over energieverbruik of antibioticagebruik). KDV heeft inzicht in deze managementsystemen van de boeren en op basis van de cijfers uit deze systemen beoordeelt KDV ieder jaar opnieuw of de boeren nog aan de strenge eisen voldoen. Daarnaast bezoeken coaches vanuit de keten de boeren jaarlijks om de resultaten te bespreken en waar nodig ondersteuning te bieden.

De boeren worden gecertificeerd door het onafhankelijke certificeringsbureau CGD BV. Nieuwe deelnemers krijgen een ingangcontrole, uitgevoerd door certificeringsbureau CGD en bestaande deelnemers worden door dit bureau bezocht en gecontroleerd volgens een steekproef.

##### **Monitoring at the sales outlets**

All the sales outlets, such as the wholesalers, retailers and restaurants, are continuously monitored to ensure that they are complying with the standards set by KDV on energy, the environment, communication and the channelling of our pork. There is continuous monitoring of the kilos of processed pork, to

ensure that what the sales outlets are selling as sustainable pork genuinely is sustainable pork. This is done by looking at the purchasing invoices and checking the accounting records of the participating companies. We compare the purchase records of the participating companies with their sales records and compare the number of kilos. In addition, the KDV coach visits all the sales outlets several times a year to monitor and support them.

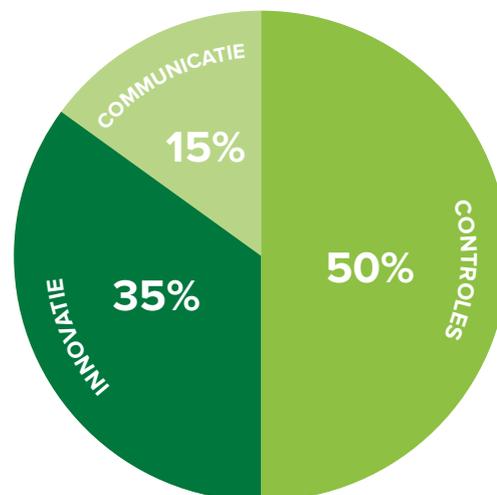
#### **Monitoring at the slaughterhouse**

The slaughterhouse works in accordance with strict standards on animal welfare. There is a pig whisperer there who trains the staff in how to treat the animals and teaches them about the natural behaviour of pigs. As well as all this, there is CCTV in the slaughterhouse so the welfare of the animals can be safeguarded and monitored continuously. By inspecting its accounting records, the flow of meat is monitored from the slaughterhouse to the shop floor. The CGD certification body visits and monitors the slaughterhouse annually.

#### *4.5. Financial resources*

KDV imposes requirements on our chain partners, certifies these partners and also makes sure they are able to comply with the requirements. Money is needed for this: around € 700,000 annually. This money is divided as follows:

- Around 50% of the budget is intended for inspections, the preparation of these inspections and certification
- Around 35% of the budget is intended for innovations: for research, development and implementation
- Around 15% of the budget is spent on communication, both for participants and consumers



This money also comes from somewhere. The farmers, customers and Westfort Vleesproducten each provide a third of the funding: the farmers pay a small contribution for each pig they supply, and each partner that sells meat with the KDV logo also pays a contribution. Westfort Vleesproducten also provides a third of the funding, as they believe in the importance of sustainability and because they see KDV as an important partner of the company.



## KDV in figures

**Energy consumption [MJ/1000 kilogram growth]**

Year	2012	2013	2014	2015
Breeding farm	2928	2328	1882	1992
Closed farm	1702	1362	1040	1082
Meat pig farm	698	473	334	232

**Antibiotics / DDD**

Year	2012	2013	2014	2015
KDV sows	5,2	5,07	5,2	3,3
<i>Dutch average sows</i>	14,6	10,9	9,3	5,4
KDV weaned piglets	-	-	-	8,5
<i>Dutch average weaned piglets</i>	-	-	-	19,6
KDV meat pigs	3,8	3,4	3,4	3,1
<i>Dutch average meat pigs</i>	9,2	5,7	5,1	4,1

**Phosphate per 1000 kg growth [kg]**

Year	2012	2013	2014	2015
Breeding farm	-	17,2	16,5	16,5
Closed farm	15,3	14,3	14	14,5
Meat pig farm	13,8	12,9	13,2	13,9

**Nitrogen per 1000 kg growth [kg]**

Year	2012	2013	2014	2015
Breeding farm	-	37,4	34,6	34
Closed farm	38,8	37,4	34,6	35,7
Meat pig farm	38,1	37,2	35,9	37,6

**Copper supply per 1000 kg growth [gr]**

Year	2012	2013	2014	2015
Breeding farm	-	184,9	167,1	176,9
Closed farm	125,8	113	103,7	100,8
Meat pig farm	90,1	82,8	71,7	61,3

**Zinc supply per 1000 kg growth [gr]**

Year	2012	2013	2014	2015
Breeding farm	-	319,7	289,8	302,5
Closed farm	302,9	279,3	241,5	245,4
Meat pig farm	297	254	213,6	212,4

**Ammonia**

Year	2012	2013	2014	2015
Meat pigs	1,37	1,35	1,3	1,27
Weaned piglets	0,31	0,29	0,24	0,28
Maternity sows	4,73	4,41	3,91	4,2
Expecting sows	3,1	2,37	2,15	2,25

**Loss**

%	2014	2015
Weaned piglets	1,92	2
Meat pigs	1,66	1,7

**Post mortem**

%	2014	2015
Pleurisy	4,1	7,1
Carcass	0,1	0,7
Organ	3,6	5,1