

Avebe Magazine

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**Love for the company,
involved in the cooperative**

**Listening to customer needs
in North America**

**Sustainable impact on
the entire chain**



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Working towards a more profitable starch potato cultivation

Our Accelerate and Strengthen strategy is a growth strategy. We emphasise the added and distinctive value of our potato starch and potato protein products. We put the customer at the centre of everything we do and create added value. We are making the step towards a more efficient, customer-driven and market-driven organisation. We improve our business processes and permanently reduce our costs.

After one year of implementing the strategy, the positive effects are already visible. We are taking greater steps in improving the balance of starch potato cultivation, faster than in recent years. This is necessary to keep starch potato cultivation attractive for our growers.

We are continuously making choices on the road to success. The impact of these choices often pays out in terms of improving potato money in the short term, but not always. In that case, the short-term choices we make now are important for the medium term. Making choices is not always easy, but it is necessary to build sustainable growth, as well as for the future prospects of our members and employees. Before we make any choices, we ask ourselves: on what does Avebe have an influence and on what not?

For example, there are all kinds of factors that influence our raw material supply (the starch potato). Allow me to state the list again: legislation and regulations, climate change and competition from other crops. It's clear that the return on starch potato cultivation must increase, and faster and more so than in recent years. The basic price for the 2024 cultivation year is EUR 105. This is an increase of more than

10% compared to a year earlier. This upward trend is necessary for Avebe to earn our place in the cultivation plan of our members. Here at Avebe everything revolves around the earning capacity of our members. We are fully committed to this. We strive to do better every day as one Avebe; members and employees. Fortunately, we can see that the prospects in the market are also positive. Demand for our products continues to increase. In doing so, we continue to emphasise the distinctive value of our products in the market.

However, there are also events on which we do not have an influence. And I would like to draw your attention to this one in particular in this foreword. On 27 May, we received the sad news that our colleague and Chief Innovation Officer Gerard ten Bolscher had passed away. Gerard made a major contribution to innovations and the protein transition. We will remember him as a team player who knew how to connect with his positive energy.

This Avebe Magazine once again offers a varied range of articles. These are some examples of what our strategy looks like in terms of its implementation. You can read about innovative research into sustainable starch ingredients, our market opportunities in industrial products, two members who talk about their company, how we collaborate with customers in North America, a practical arable farming pilot in the province of Drenthe and much more.

Enjoy the read!

David Fousert
CEO Royal Avebe



Innovative research into sustainable starch ingredients

At the Innovation Centre in Groningen, Royal Avebe is working on the FIBERS project, in which potato starch is converted based on CarbExplore Research's enzyme technology. This produces new and sustainable starch ingredients.

By changing the structure of starch, you can give it different functionalities. When developing these new starch ingredients, Avebe pays particular attention to health and texture benefits. For example, plant-based cottage cheese that is low in fat, but with a rich and creamy flavour. There is increasing attention to food based on sustainable plant-based ingredients. It's important for Avebe to continue to innovate and become more sustainable. We are not alone in this in the FIBERS project, but work together with the University Medical Centre Groningen (UMCG) and CarbExplore Research.

What does the project yield?

With the knowledge gained from the FIBERS project, Avebe is expanding the starch portfolio (Etenia®). This potato starch product is an important ingredient for plant-based foods, such as plant-based cream cheese, cottage cheese and yoghurt. Avebe currently has two products in its product portfolio that are made using enzymes. By conducting research into new enzymes, new possibilities arise.

We can make our production process more sustainable, because using enzymes requires less heat (energy) and water. What is unique about this project is that Prof. Dr. Paul de Vos of the UMCG will investigate the benefits of the new starch ingredients on metabolism, the immune system and mental health.

Enzyme technology

The aim is to develop new starch derivatives using natural enzymes. The first step is to select existing enzymes that are suitable for conversion to starch. We focus on new structures that give texture to foods and enzymes that remain stable during processing. After this analysis based on CarbExplore Research's enzyme technology, the most suitable enzymes are further investigated and developed. CarbExplore Research specialises in the identification and selection of specific carbohydrate-modifying enzymes. There are only a handful of parties that have specialised so much in the field of enzymatic modification of carbohydrates and the analysis of the end



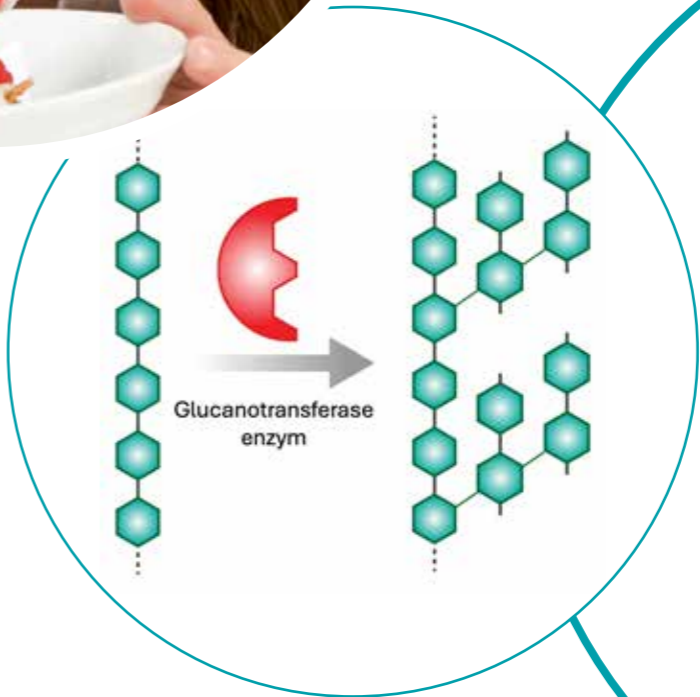
FIBERS

FIBERS stands for: 'Functional Ingredients by Enzymatic Redesign of Starch'. Avebe, together with UMCG, has received more than € 1.4 million in European subsidy from the Just Transition Fund (JTF) for the implementation. The JTF, the 'Fund for a Just Energy Transition', is a European fund for areas most affected by the transition to a green economy. Through this fund, the European Union aims to reduce socio-economic inequality. The JTF arises from the European Green Deal, the program for a climate-neutral Europe by 2050. To achieve this transition in the Northern Netherlands, € 330 million has been pledged until 2027.

products. For this project, we have identified a large group of different enzymes that make potentially interesting modifications to the starch. We mainly look at enzymes that modify the starch by extending chains, introducing branches or changing the bond between the 'glucose monomers'. We expect that 2 to 3 enzymes will ultimately emerge that we can further investigate and develop.

Knowledge about health effects

By using enzymes you can change glucose bonds in potato starch, so that it digests less quickly. This is particularly beneficial for our stomach and intestines. The starch therefore enters the large intestine and forms an important source of nutrition for the intestinal flora. The intestinal flora produces substances that are healthy for our immune system, metabolism and mental health. In addition, slowly digesting starches release glucose over a longer period of time, resulting in a lower sugar peak in the blood. At the UMCG they use special systems to investigate the positive effects this has on metabolism, the immune system and mental health.



Collaborating parties:



Co-financed by:

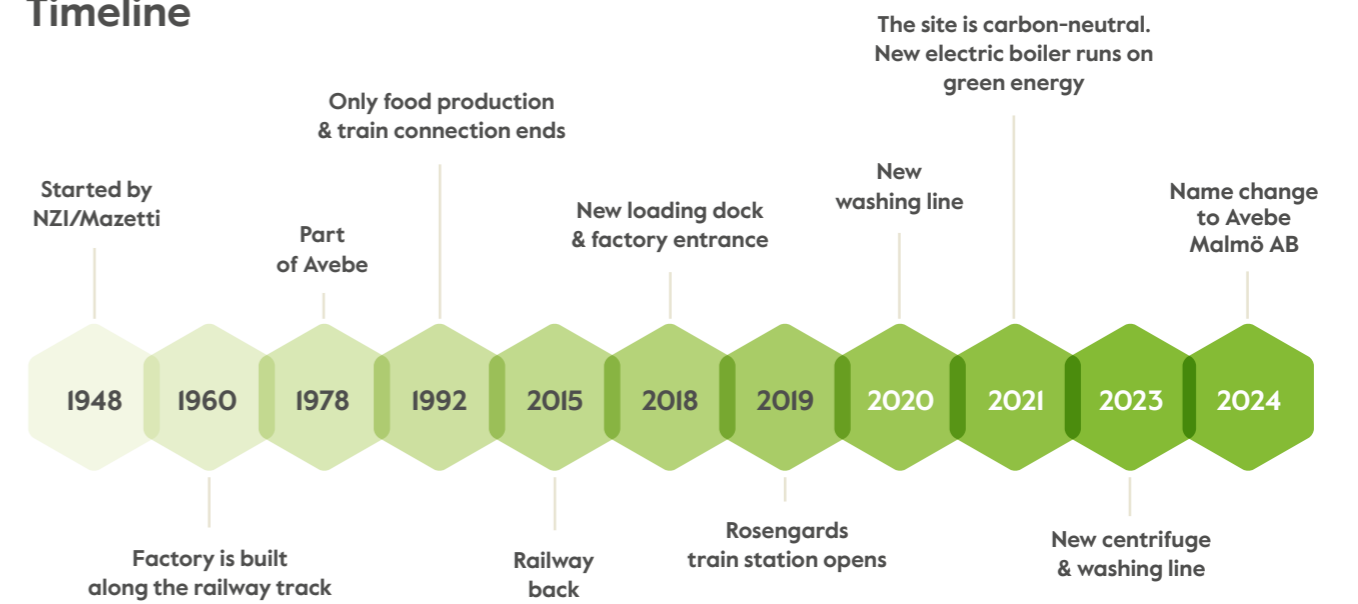


Celebrating 75 years of production in Sweden

On Tuesday 4 June, Royal Avebe celebrated a 75th anniversary in Malmö, Sweden: the first starch derivatives were produced here 75 years ago.



Timeline



In 1978, Avebe took over the activities of the Stalex production site in Malmö. And although the production site in Malmö has been part of Avebe since 1978, the name has never changed. But that's changing now. The authorities have approved the name change from Stalex AB to Avebe Malmö AB.

Ready for a bright future for Avebe Malmö

David Fousert addressed the Swedish employees: "I'm very proud of the important value that this factory has for Avebe. And we foresee a bright future, because we produce various unique modified food starches at this location. And in a plant-based economy, these products are perfect to use as ingredients in consumer products such as soups and sauces, but also in special cheese and snack products."

Avebe Malmö is Avebe's first carbon-neutral production site

Avebe's first carbon-neutral production site has been realised by installing a new electric steam boiler (e-boiler) that runs on green energy. This is the beginning of a more sustainable organisation; Avebe has now installed electric boilers at all production sites in the Netherlands. Other examples of more sustainable production sites include raw materials being brought to the sites by train, while water consumption has been reduced by 28% since 2017.

Positive force

The Avebe team in Malmö has been a positive force for the culture in the area. They have been active in making the area safer through a Business Improvement District (BID). Safety is of the highest priority at Avebe.

David Fousert and Ronny Olsen



Companies, associations, real estate owners and the city of Malmö work together with BID Malmö to improve the quality of life in the Sofielund and Möllevången districts. Our production site is located in the Sofielund district, where the lighting and parking situation have been improved.

A sustainable alternative for industrial products

Royal Avebe started developing additives for industrial products based on potato starch years ago. These activities have grown considerably over the past decade.

Business leader Roelof de Weerd continues to see strong opportunities for the coming years.

We make additives for tile adhesives, cement and plasters and dry mortars for the construction industry. The products, which are of course based on starch, thicken and improve the structure, resulting in optimal processability of these construction products. Tile adhesives prevent slipping or sinking and extend the time you have to install the tiles.

Sustainable alternatives

The range includes replacements for synthetic adhesives and we are developing sustainable solutions for the paper industry, including PFAS-free paper coatings. “PFAS, which stands for per- and polyfluoroalkyl substances, raises a lot of discussions because they are harmful to humans and animals and do not break down in nature,” Roelof explains. “PFAS do have very useful properties, such as grease and dirt repellency, but come with very undesirable side effects. The demand for more sustainable alternatives is therefore increasing. On the one hand, due to the industry’s desire to become more sustainable and, on the other, forced by new regulations. At Avebe we work on plant-based and natural solutions based on potatoes, for a more sustainable future.”

Food packaging

We have also developed natural solutions for, for example, the paper industry. These are paper coatings that prevent the leakage of fats and oils, such as in pizza boxes. These coatings replace synthetic materials. “The potato may seem simple, but the starch and protein from it make this tuber extremely versatile. You can use it in many ways and adapt it to different circumstances. Our additives are ideal for food packaging, in the form of a coating, an adhesive or in the paper packaging itself. They are clean and safe to use and suitable for many different types of food packaging.”

Strategic spearhead

Roelof can see that Avebe is leading the way in the promising industrial applications market. Products that we developed a number of years ago now meet market demand. In the past year and a half, the economy has declined slightly due to global conflicts, but Roelof can now see recovery and further growth in the short term. “The development of industrial products based on natural raw materials has now become another strategic spearhead



Roelof de Weerd
Business leader

for Avebe. The market figures confirm this growth potential. We have various projects to achieve further growth and new products and solutions for a healthy future. Within the Industrial team, we work together with enthusiastic colleagues from sales, innovation, marketing and application support to realise this.”

Modernisation at the Lüchow production site

Major investments will be made at the production site in Lüchow in the coming period. One of the most important improvements is the replacement of the 37-year-old low-voltage main distributor.

With the modernisation of these electrical installations, major steps are being taken in the field of technical safety, which is important to ensure health and safety in the workplace. The low-voltage main distributor ensures that power is distributed safely and efficiently across the production site.

Another important investment is an update of the process software, which automatically controls all production processes in Lüchow. The last update was fifteen years ago, which underlines the need for this upgrade. Both investments are necessary to make the production site future-proof and efficient.

Work on low-voltage main distributor started

In mid-June, the first important components for the modernisation of the low-voltage main distributor were delivered to our German production site in Lüchow. Due to their weight, the new cables and couplings were lifted to the plant with a forklift. “The installation of the modern switchgear allows us to connect all parts of the system in the future,” Toralf Perst, Electrical Engineering coordinator, explains.

All parts of one of the four switch cabinets will be renewed before the start of the campaign in September. The other three control cabinets of the factory will be modernised next year. “We’ve carefully considered this planning,” Kenny Stibbe explains. He is responsible for the investment projects in Germany. “We can use the analysis and disruption data to evaluate how the first step went and carry out the next steps with as few disruptions as possible, next year.”



Alrik de Buck
Avebe youth council
member

Love for the company and being involved in the cooperative

Alrik de Buck from Nieuweroord is crazy about arable farming and wants to be involved in Royal Avebe through the youth council. 'It's good to know what's going on.'

Alrik de Buck (24) farms on the sandy soil north-east of the Dutch town of Hooogeveen. In partnership with his parents, he cultivates 90 hectares of land with the main crops being 40 hectares of

starch potatoes and 35 hectares of onions for propagation. The De Buck family also has 10 to 14 hectares of sugar beets and about 6 to 7 hectares of grain. The cultivation plan is rotated by exchanging

land with the neighbours, a dairy farm. "With so many harvested crops, four years of grass as a rest crop works very well in our opinion." After completing the Higher Agricultural School in Dronten and a six-month stay in Canada, Alrik feels completely at home at the parental company. "I love arable farming and growing beautiful, healthy crops. I want to continue to do that well in the future,

although sometimes I do have some concerns about that. That's why I feel connected with Avebe. As a farmers' cooperative, they must be ready for the future as well."

Challenges

The challenges for the future are tough, Alrik explains, but he has the feeling that Avebe understands what is needed. "It's not going to be easy. This is mainly due to increasing costs when growing starch potatoes. The 2022 cultivation year was a good year for us as a grower, after which Avebe had to take a step back in terms of the basic price. Now, the desire of growers is to reverse that, otherwise, achieving returns will be a challenge."

Green fertilisers

Requirements for rest crops, crop protection and fertilisation can cause some frustration among growers. According to Alrik, drawing up a good cultivation plan with green fertilisers, for example, is quite a puzzle. 'We don't want to run any risk with nematodes, not even for the onions. This year is not an easy year with a late spring and bad spots due to flooding. Many companies suffer from structure damage. I also saw damage from insects feeding on beets and onions.'

Conscious farming

An important principle at Alrik's company is good agricultural practices. "We've always farmed very consciously. Partly because of this, we're doing very well in terms of nematodes. I also actively sample for that. The propagation of our seed potatoes has been outsourced to

a fellow seed potato grower. My father already worked with them before me. Our area of starch potatoes is not very large and I think you should focus on what you're good at. The onions require a lot of time and that's why my father resolutely opted to outsource the seed potatoes."

Fertility

The De Buck family has been working on the land with a generous supply of compost for twenty years. "This has contributed to improving the fertility of the soil. I like to take good care of the land and we do all the work ourselves, as much as possible. The current cultivation plan generates enough work at our own company. We grow Serestas for early delivery and can store 900 to 1000 tons of BMCs in the barn until March. These varieties are both from Averis."

Ambitions

Alrik has the ambition to develop the company further. "I mainly think about the long term and the future. For example, I might want to build a new barn. My father soon wants to transfer the company to me. So he's mainly focused on the present and the short term, until the takeover. Fortunately, I can talk to him about the coming years. As far as I'm concerned, we'll be working together for another ten years." The young arable farmer also wants to keep learning and trying things. "I would like to try a phytophthora-resistant variety such as Avenger. You may leave something on the starch side of things, but you can save some on the cost side."

Youth council

Alrik has been a member of the Avebe youth council for two years. He finds the knowledge and contacts he gains there enriching. "We share our vision with the youth council and we form a sounding board for the Supervisory Board. By organising a youth day, we are engaging with the new generation of growers. This year this day was at Averis, in Valthermond. I think it's important to contribute to this."

Looking ahead

During meetings, Alrik notices that there are differences between the generations of growers. The older generation feels more affiliated with the cooperative, whereas the youngest generation is more concerned with the returns on their companies. Yet he thinks that working together within Avebe will bring a lot of positives, especially for the young growers. "When you're young, you want to look ten or twenty years ahead."



We share our vision with the youth council and form a sounding board for the Supervisory Board

Successful potato cultivation in the KPW region

Julian Keil (36), has been working as a manager at Ahrenholz GbR since 2015 and has been co-owner of the company since 2021. Ahrenholz GbR is located in Zahrenholz (Lower Saxony, Germany) and cultivates approximately 850 hectares of arable land. Of this, 250 hectares are used for growing potatoes, in addition to corn, sugar beets and grain. The company grows starch potatoes for Royal Avebe on approximately 50 hectares.

Julian explains that they specialise in growing Waxy potatoes: “We started with conventional potatoes, but the Waxy program was promising.

The Karli variety suits our company well and produces good yields. The soil conditions favour Karli cultivation, because we farm practically on pure sand. Overall, we are very satisfied with the harvesting processes. We can irrigate practically any plot. Of course, we have to take the limited water quota into account. This way we ensure that the potatoes generate high yields,” Julian explains. “We score an average of 23 soil points.”

Gradual expansion to Waxy potatoes

The transition to waxy was gradual. “We started with the Henriëtte variety in 2014. Waxy quickly proved to be more profitable. Later we also added the Karli variety. Karli has better properties than Henriëtte, especially in terms of Phytophthora resistance, yield and starch content,” Julian explains. This is once again relevant, because many growers are currently dealing with wet conditions and extreme Phytophthora pressure.

Julian also keeps an eye on the new potato varieties from Averis. “In the future, we might want to grow Aveline. But at this point, it is too early to make such decisions. Based on the test results and what I’ve seen from Aveline so far, it

might be worth it. The choice between conventional and Waxy potatoes remains an important aspect of our successful harvest.”

Increase in extremes

Julian emphasizes that climate change has major consequences for local agriculture. “Extreme weather events have increased significantly over the past five years. Longer periods of drought and heavy storms pose challenges for farmers. In the spring of 2024, there was a lot of rain, sometimes more than 50 millimetres at once. And it has also become warmer. Temperatures above 30 degrees are very harmful to the plants. Unfortunately, irrigation, as we currently apply it, often no longer helps. You need to specialise, improve technology and act quickly. This makes a high degree of

mechanisation with irrigation machines essential, so that you can really water all the potatoes every week to prevent losses.”

Harvest season 2024

Julian is positively surprised by the current harvest season. “Despite the excessive rainfall, the prospects are good. Yet it remains a nervous time until the harvest. Our Karli potatoes are harvested in October. They were planted at the end of March and have had a promising growth phase. We are hoping for a successful harvest.”

Julian Keil
Grower in KPW region



Trial and demo fields with our own varieties

Royal Avebe and Averis have various trial and demo fields in the Netherlands and Germany. In these fields, we collect and share information about existing and future potato varieties. The trial and demo fields are part of the 3xH strategic program. This program is aimed at achieving a ‘healthy farm’, a ‘healthy soil’ and a ‘healthy environment’.

During demo field days, both members and non-members and stakeholders such as governments can visit the fields where different potato varieties grow. The Avebe and Averis teams are present to share experiences about the yield and starch content of the varieties. They also provide advice on cultivation and harvest times, fertilisation and crop protection. They also explain resistance to various diseases and pests per variety.

Each variety requires specific pre-treatment

In addition to the variety demos, trials and demos are also carried out in Valthermond (Drenthe, the Netherlands) with ‘Seed potato pre-treatment’, ‘N fertilisation’, ‘irrigation’ and ‘sustainability’. During the field days on May 29 and 30, we mainly looked at the trials where differences in crops were clearly visible, such as ‘seed potato pre-treatment’ and the ‘variety demo’.

The ‘seed potato pre-treatment’ trial was expanded last year, so that we can indicate the limits and consequences of incorrect seed potato pre-treatment. We investigate what attention should be paid to the seed potatoes of a variety. This is to achieve the best growth results. Our trials show that pre-treating seed potatoes contributes

to the start of crop growth. We also notice that each variety requires a specific pre-treatment. The aim is to show what works well and what does not.

This year, among other things, an adjustment was made to store at 8°C, because the humidity level during storage was too low. As a result, the intended differences did not emerge clearly. This has been adapted to storage in a barn at varying temperatures. In addition, the potatoes sprouted twice. The result was a physiologically aged tuber. The varieties in the 2024 trial are: Antora, Aventor, Hermans, KA 2014-0684, KA 2015-0926, KA 2015-0958 and KA 2015-0995. We research the varieties for several years to limit annual influences. We will announce the results in the Optimeel report for the 2024 cultivation year.

Successful demo field day in Klein Stavern

At the demo field day of 10 July, sixteen starch potato varieties from Averis were on display in Klein Stavern (Emsland, Germany). This makes it possible for members to compare varieties. Interest in the resistant potato varieties was particularly high. Due to the wet spring and persistent rain, Phytophthora is

present in several places. The crop protection products to counter this are scarce and expensive. Growing varieties with improved Phytophthora resistance, especially Aveline and Avenger, provide growers with major advantages compared to conventional potato varieties.

Starch potato varieties from Averis

Avebe’s own breeding and seed potato company Averis specialises in the development of varieties that make potato cultivation more sustainable and that produce a better yield for the grower. The new varieties are more resistant to virus and potato diseases and require fewer crop protection products during cultivation.



Avebe people in the picture

Meet the people behind Royal Avebe. In each edition of Avebe Magazine we put a number of Avebe employees in the picture. What role do they play within the organisation? Read about it here.



Lyanne Roeles
Communication specialist

“I especially like the fact that Avebe affects the entire chain: from field to customer! There’s always something to communicate. As responsible officer for external communication, I tell Avebe’s story. I also take care of the finishing touches at the events we organise. Follow Avebe on social media and stay informed of what’s going on within the entire chain.”



Gijs Koopmans
Finance director Agro and
Chairman of the pension fund

“I recently joined the board of the Avebe pension fund. I look forward to working with the other board members to manage the upcoming changes resulting from the Future Pensions Act. For me it is essential that we do this while remaining balanced and comprehensible, listening carefully to the views, concerns and suggestions of all participants.”



Anton Krynychanskyi
Operator

“In my home country, Ukraine, I worked as a senior engineer in a corn starch factory. At Avebe I started with a six-month internship at the Dallmin factory. Now I work with various systems in the starch department and check analyses. The processes are slightly different from those in Ukrainian factories. Everything is more automated here, the technology is much more modern and therefore more economical. Safety too has a much higher priority.”



Meleknur Tüzün
Segment manager

“Avebe is present at various conferences worldwide, where we showcase our latest innovations and solutions. I recently had the opportunity to present our exciting new texture solution for plant-based fermented yogurts at the Dairy Innovation Strategies Conference in Copenhagen. Connecting with customers and inspiring them is incredibly rewarding. I am proud that Avebe is part of the food of the future by developing sustainable and delicious alternatives.”



Harry Scholtens
Account Manager Agro

“I worked at the WUR experimental farm in Valthermond for more than 30 years. I can put the knowledge I gained there to good use in my position as account manager within the Agro team. My passion is working on crops and following developments in potato cultivation. What also really appeals to me about my position at Avebe is the interaction with the members.”



Wouter Duisterwinkel
Application technologist Bakery

“Developing new products is a creative process. It takes a lot of trial and error until the perfect texture and quality is found. We listen to the specific wishes of our customers or take market demand into account. I am mainly involved in developing new applications for our products in the bakery segment. For example, we recently developed a good plant-based cake recipe, where the main challenge was to replace the egg.”

Listening to customer needs in North America

Royal Avebe is a niche player in the North American starch market. In a market dominated by corn starch, Avebe focuses on the unique benefits of potato starch for customised solutions.

“Avebe is a relatively small player in the North American starch market,” Sales Manager Joseph Lombardi explains. “Most starch ingredients here come

from corn, but potato starch is a unique and differentiated feedstock.

We specifically look for customers who can benefit from the unique properties of potato starch and offer solutions that corn cannot match.” Joseph mentions plant-based cheeses as an example.

“Our PerfectaSOL® products offer a unique texture and extensibility that are highly desirable in these cheeses. Another example is in confectionery, in which potato starch can replace gelatin and provide greater clarity and better texture than corn starch.”

Listening to customers

Understanding and responding to customer needs is central to Avebe.

Joseph: “We listen very carefully to our customers. For example, when there was a growing demand for plant-based cheeses with improved melting and stretching properties, we developed a range of products under the PerfectaSOL® brand to meet these needs. Our customers were also looking for a plant-based yoghurt with a heavier, creamier texture. Our initial solutions were not thick enough. By benchmarking against both plant-based and traditional

yoghurts, we created a new plant-based yoghurt solution that meets our customers’ expectations.”

Support and broader market opportunities

This targeted approach, with a focus on the right product-market combinations instead of bulk production, produces positive responses from customers.

“Our customers really appreciate it,” Joseph explains. “We engage with them on an ongoing basis to understand their specific project and product needs.

We daily provide support on technical aspects and application of our products, which our customers appreciate. For example, if they are working on a project and need guidance in the formulation and processing, our experts are ready to help.”

Continuous customer feedback leads to new market opportunities as well. Joseph: “If several customers come to us with the same challenges, it may present a gap in the market. For example, if several dairy producers indicate that their customers are looking for certain qualities in yoghurt that current solutions do not provide, we pass that information on to our innovation team. This way we can meet specific customer needs and meet broader market demands.”



Joseph Lombardi
Sales Manager

Focus on unique benefits

Precisely because potato starch and potato protein have so many different applications, Joseph emphasises the importance of a strategic focus.

“We want to focus on areas where our potato ingredients can really make a difference. Although potato starch can be used in a wide variety of applications, such as soups, sauces and dressings, corn starch is sometimes cheaper and more locally available in these standard applications. We therefore prefer to focus on applications where the unique benefits of potato starch and protein come into their own, so that we get more value out of them.”

As a relatively small player in the local market, Avebe is flexible and agile.

“We can respond quickly to customer needs and market changes,” Joseph says. “Our size and approach enable us to deliver unique solutions and excellent service and support. This sets us apart from larger competitors who try to be everything to everyone.”



Why potatoes in plant-based cheese?

At Royal Avebe we notice that the demand for plant-based and clean label in combination with a pleasant texture and flavour is increasing. There are many challenges when creating plant-based dairy and cheese. For example, most plant-based ingredients are poorly soluble, differ in colour and flavour or vary in textures. Avebe’s innovative ingredient PerfectaSOL® has the perfect texture for plant-based food products.

PerfectaSOL® by Avebe

PerfectaSOL® is a combination of potato starch and protein. This innovation makes it possible to create excellent plant-based cheese products, among other things. Potato in plant-based food products has proven to offer a perfect texture. This includes a texture that is easy to cut or that offers perfect extensibility. In addition, the flavour and odour are neutral. We can apply this to different types of plant-based cheese. Plant-based cheese with our potato protein and starch is available in the supermarkets now.

Did you know...

Our collaboration partner Brenntag received the ‘Best Ingredients Innovation Award’ with Avebe’s plant-based Greek cheese alternatives. They received this award at the Saudi Gulf Manufacturing Food Exhibition in Riyadh, Saudi Arabia.

Sustainable impact on the entire chain

In August 2023, Royal Avebe introduced a renewed sustainability strategy that focuses on making the entire chain more sustainable; from potato cultivation to delivery to customers. This strategy has seven sustainability programs that contribute to the overarching goal of reducing the overall environmental impact by 30% in 2030. Suppliers and customers are becoming more sustainable as well.

On the cultivation side, Avebe focuses on sustainable agricultural practices. “We focus on the three Hs,” Sustainability Employee Joosje Overgoor explains. “They stand for a healthy farm, healthy soil and a healthy environment. This means that sustainability is being worked on from the ground up, starting from the cultivation of the crops.”

Making an impact on the entire chain

In addition to the 3xH program, Avebe has six sustainability programs with the aim of reducing the impact across the entire chain by 30% in 2030. Joosje: “The programs are aimed at making our side streams circular, reducing our energy and carbon footprint and reducing our water consumption. Furthermore, the programs focus on reducing our footprint internally by optimising our product mix, and reducing our impact with our suppliers.” Each program has specific goals that contribute to Avebe’s broader sustainability goal. Sustainability Specialist Jeen Osinga explains: “Within these programs you can exert control to reduce our impact and improve your own processes, for example through improvement teams, or by investing in new technology. You can exert external

control by making a selection of your suppliers, for example by checking their CO₂ impact or a supplier’s sustainability objectives in addition to other criteria. At the same time, this gives us insight into the ambition and impact of our suppliers.”

Roadmaps to 2030

“To achieve the goals,” Jeen goes on, “roadmaps have been developed that can be achieved within each program. We also build on previous successes. This means that initiatives are being taken continuously to reduce impact and integrate sustainable practices into business operations.”

It works both ways

Just as Avebe expects suppliers to operate increasingly sustainably, customers expect the same from Avebe. “If we can offer the same product functionalities, but more sustainably than another party, then it works both ways,” Director of Product Line Management Bas Gerrits says. He is responsible for the portfolio of products that Avebe purchases and sells and, in addition to optimising value creation of the portfolio, focuses on making packaging more sustainable and reducing energy and CO₂ emissions

in the product portfolio. “The fact that we can also demonstrate this focus on sustainability through our annual life cycle analyses is a big plus. Through these analyses we determine the CO₂ impact of all our products, which produces valuable insights for both internal decisions and external communications with customers. Customers really appreciate that.”

Intrinsic motivation

“The most important link between our department and Bas’s department is that we help Bas provide sustainability insights,” Jeen explains. “That looks good for our customers as well as internally for our colleagues.”

The intrinsic motivation to become more sustainable is strongly present within Avebe, Joosje can tell. “This is also evident from the investments made to reduce energy consumption, such as the switch to green energy with e-boilers. Customers ask for it and the government requires us to be sustainable, but here at Avebe we really have that drive because we want it ourselves. Our colleagues are increasingly engaged with sustainability. That mindset helps enormously in achieving the goals. We are therefore



From left to right: Jeen Osinga, Sustainability Specialist, Joosje Overgoor, Sustainability Employee and Bas Gerrits, Product Line Director Management

moving in the right direction towards achieving our goal in 2030. ”

A gold EcoVadis medal

Avebe achieved a gold EcoVadis medal for the second year in a row. With this recognition, Avebe ranks in the top 5% of best-rated companies in the industry. EcoVadis internationally assesses sustainability performance in the areas of the environment, human and labour rights, ethics and purchasing. Avebe is continuously working on sustainability and a golden EcoVadis score is confirmation of these efforts for the entire organisation.



Science Based Targets initiative

Avebe has committed to the Science Based Targets initiative (SBTi). This helps companies set scientifically based targets to reduce their CO₂ emissions, in line with the Paris Agreement climate goals. It provides guidance, validation and support to help companies achieve their climate goals and report transparently. Companies that want to commit to the SBTi must first submit a letter of intent, then set goals and have them approved. Avebe is now working on submitting its goals and subsequently having them approved. “It shows that we take sustainability very seriously,” Jeen says.

Working together for future-proof agriculture

As a partner within the foundation Innovatie Veenkoloniën, Royal Avebe worked together with other chain and area parties last six months on the Area Plan Veenkoloniën 'A feasible map: towards a future-proof Veenkolonial construction plan'. On 4 July, Innovatie Veenkoloniën presented the plan to the deputies of the provincial authorities of Drenthe and Groningen. Marleen de Rond-Schouten is Managing Director Agro & Strategy of Avebe and Chairman of Innovatie Veenkoloniën. She explains the Area Plan.

Innovatie Veenkoloniën was founded in 2012 with the aim of advancing agriculture in the peat districts through innovation. Innovatie Veenkoloniën became an independent foundation in 2022. Marleen explains why Innovatie Veenkoloniën has developed an Area Plan. "With this area plan, Innovatie Veenkoloniën offers solutions and measures to achieve the goals set for the Provincial Rural Area Programmes of Drenthe and Groningen, in a way that suits agricultural practice. The area plan is an offer to the government. The aim is for the area to gain experience, to experiment with various measures and to focus on innovation rather than on generic measures to achieve the tasks."

Rest crop

She continues: "A proposed government measure, for example, is to have a rest crop as the main crop on an arable plot once every three years. Such a measure could hit particularly hard here and have a negative impact on agriculture in the Peat Districts and the entrepreneurship of Avebe members. The Peat District have

a character all their own. There is a lot of potential to achieve the goals in their own way, and that requires an individual approach."

Customisation

To prove to the provincial authorities that Innovatie Veenkoloniën, growers, banks, municipalities, water boards, educational institutions, agricultural nature conversation societies, accountants

and cultivation advisors in the area have the knowledge and skills to achieve the goals in a way that does offer customised solutions for the area, Innovatie Veenkoloniën has given the instruction to draw up the Area Plan. "In this plan we show that we can achieve the goals while taking into account the earning capacity of arable farmers. We only ask for time and space to achieve those goals," Marleen explains.

Marleen de Rond-Schouten
Managing director
Agro & Strategy



Key themes

The Area Plan focuses on six themes: groundwater quality, surface water quality, water quantity, nitrogen, climate and nature in the Peat Districts. "To arrive at a common vision, we held sessions with water boards, the Ministry of Agriculture, Fisheries, Food Security and Nature, the National Institute for Public Health and the Environment (RIVM) and water and soil experts. The purpose of this was to describe how existing knowledge can be translated into practical measures that will work on farms in the Peat Districts."

Collaboration and implementation

What will happen now with the plan? Marleen: "Innovatie Veenkoloniën has lobbied intensively to include our Area Plan in the final provincial plans. If we get the green light, implementation will take place in the coming years. One of the focus areas is working on gaining more cultivation technical insight for growers. This will be done through study groups, trials and research, among other things, so that they can learn from each other and work together to solve specific problem areas. We hope that the government will choose to allow the Peat Districts to experiment and innovate."



Avebe's starches in products of LOTTE Fine Chemical

Royal Avebe does business all over the world, including in South Korea. Our starches are used in products of LOTTE Fine Chemical, a company that produces chemical materials from chlorine and ammonia, as well as green materials such as cellulose variants for paint, or even food. The company has been working with Avebe since 2002.

Marcus Meier (left)
manager Business Development
Avebe, Jinwook Park (right)
Purchasing Manager LOTTE Fine
Chemical



Jinwook Park, Purchasing Manager at LOTTE Fine Chemical, oversees the purchasing of various chemical products and additives, such as Avebe's modified starches. He has no doubts: working with Avebe has benefited both companies over the past five years. On the one hand, Avebe is strengthening its presence in



Asia and LOTTE Fine Chemical uses Avebe's high-quality starches to make their products even better. "LOTTE Fine Chemical was founded in 1964 as a urea fertiliser manufacturer," Park explains. "In 1980, we expanded our portfolio to include chemical products such as Methylamine and Dimethylformamide, before being acquired by Samsung Group in 1994. We continued to expand our portfolio under the name Samsung Fine Chemical until 2016, when LOTTE Group took over and we were renamed LOTTE Fine Chemical. We added green materials to our portfolio in 2018, which formed the basis for our sustainable growth. We still have two business divisions: chemical and green materials."

Avebe started supplying starches to Samsung in 2002. LOTTE Fine Chemical continued with the cellulose branch, to which Avebe supplies.

Cellulose variants

LOTTE Fine Chemical's green materials are cellulose variants used in construction and the food, cosmetic and pharmaceutical industries. They include the brand names Mecellose, a construction additive with various applications, such as cement mortar and tile adhesive; Hecellose, an additive that improves viscosity, water retention and stability of water-soluble paints and is used for personal care and household products; AnyCoat, which improves the delivery of pharmaceutical products and AnyAddy, a food additive that improves the texture and stability of food.

LOTTE Fine Chemical found a partner in Avebe and uses two products in Mecellose: CasuCOL® 301 and Opagel™ FP6. "Mecellose is a non-ionic cellulose ether used in a wide range of applications, from building and construction to personal care

products," Park explains. "Its properties include that it dissolves readily in cold water, forms a clear, tough and flexible film providing excellent barrier properties against oils and greases, and that it improves the workability and processing of cement. It also changes into a gel form when the temperature of the solution rises to a certain level. The gel returns to its original solution state upon cooling."

"We use Avebe starches to improve this product," Park continues. "We chose Avebe back in 2002, because it is the most famous starch producer in the world. This means that their products are certified and the company already has many customers. We are very satisfied with Avebe products, because they perform very well and are consistent in their quality. Avebe's fast and accurate feedback allows us to resolve potential issues, especially when we need to develop

new products or encounter issues. These are the reasons why we trust and choose Avebe's products and technology."

Vision for the future

Park sees that the current global market situation is very vulnerable for LOTTE Fine Chemical's business. "We have to cope with low demand and strong competition in the global market. But I'm confident we'll find a way to expand the market and increase profitability, even though it's a difficult situation now. LOTTE Fine Chemical and Avebe have had a close relationship since 2002 and we'll continue to grow together. We want to continuously develop more business opportunities."

We chose Avebe back in 2002 because it is the most famous starch producer in the world

Maurice van Asperen
manager Operational Excellence



Managing performance, a continuous process

Managing performance is not only good for improving productivity, efficiency and quality, but also ensures continuous innovation and sustainable growth.

At Royal Avebe, we use a Performance Control System to monitor and streamline performance. We do this using World Class Operations Management (WCOM). It is a structured method for structurally improving and anchoring business results, particularly operational results.

Within WCOM, we use a so-called Infinity Loop. This Loop consists of a performance cycle, which starts with set goals. “From the performance cycle, we move to the improvement cycle, which leads to step-by-step, continuous improvements”, Operational Excellence Manager Maurice van Asperen explains. “This includes loss analyses and improvement plans, which are implemented and standardised by improvement teams. The improvement cycle then moves back to the performance cycle, where we check whether goals have been achieved and take actions that lead to new objectives. So this will continue indefinitely.”

Short-cycle operations

So how does this work in practice? Maurice: “At a production location, we start the day with a standing meeting,

which creates active dynamics. Operators and team leaders perform process checks during work and discuss them every four to eight hours. In addition, we report daily, weekly and monthly on our results and any deviations identified. This high frequency creates awareness and enables us to look ahead in short cycles and influence processes. This applies to all locations, although the approach may slightly differ per location.”

The short cycles and management of performance processes promote the right behaviour of people and help to prevent deviations in the production process. “Our approach also includes facilitating, coaching and training to ensure everyone adheres to the agreements and quality improves”, says Maurice. “We continuously refine our objectives through the improvements

we implement. We prefer to make adjustments in advance to avoid getting a poor result.”

Doing the right things

Avebe wants to continuously improve, and working via the Infinity Loop is a prerequisite for this, according to Maurice. “You can do a lot in the improvement cycle, but if you don’t set up the performance cycle properly, your improvements will ultimately not be sustainable. For the colleagues involved, the process involves a lot of management and accountability, but help is always available. By using this structure and checking whether what you expect is also the desired outcome, the chance that you will do the right things is much greater.”

Drenthe arable farmers start practical pilot

This year, 38 Drenthe arable farmers are participating in the arable farming practical pilot. The aim of the pilot is to gain more insight into sustainability performance, to improve it and to learn from each other.

The province of Drenthe has been rewarding dairy farmers based on their sustainability performance since 2018. This positively encourages them to take steps in the field of sustainability in their business operations. The province decided to do the same for arable farmers in 2022. A more difficult task, because there is no Cycle Indicator for arable farming. Arable farmers have to deal with more customers and lack a central data system. To be able to estimate how arable farmers in Drenthe performed in terms of sustainability, the province started a pilot with 14 arable farmers that year.

KPIs

Project leader at the province of Drenthe Anet Abbing-Zijgers contacted BO Akkerbouw in 2023. “Arable farmers who participated in our provincial pilot were tested using Key Performance Indicators (KPIs) that were also included in the Arable Farming Biodiversity Monitor. The Biodiversity Monitor is the instrument that makes the performance of Dutch arable farming to strengthen biodiversity clearly measurable. BO Akkerbouw was a co-initiator. We decided to join forces in 2024 to conduct a practical pilot with Drenthe arable farmers. The aim is to gain experience with the KPIs of the Arable Farming Biodiversity Monitor (BMA). We use the eight KPIs of the BMA and have added three that are specific to the province of Drenthe. In Drenthe, for example, dairy farmers and arable farmers exchange a lot of land. We also take this

into account in the pilot via the KPI for the crop rotation index. Within this KPI, a six-year review is carried out to determine what was on a plot of land. So ownership isn’t important, but the crop is. We really think from the bottom up. A score is then assigned to this. The year in which a particular arable farmer uses the land, he or she receives a score. This ensures better collaboration to keep that joint score high.”

Taking stock in 2024

The practical pilot started on 1 January 2024. “We consciously chose to recruit arable farmers before the start of cultivation”, says Anet. “This gave them sufficient time to collect data needed to gain insight into sustainability performance. At the end of June, we had the first knowledge meeting about crop rotation and green fertilisers. This year, we’ll look at what we’re up against, how we can solve problems, what the scores achieved exactly mean for arable farmers and how they can use them.”

Close partnership

The partnership has been very pleasant so far. Anet: “Avebe, Agrifirm, Cosun and Innovatie Veenkoloniën are part of a working group, so the pilot has a

practical approach. Together with these parties, we organise four knowledge sessions for the participants. I think it’s very valuable that we, together with all parties, are looking for the best way to make sustainable farming pay. It’s impressive that these arable farmers are open to this and, despite all the things that are now being imposed on them by the government, they’re still looking to the future.”



Avebe in brief



Avebe's 5th Silo Tour

A group of sporty Avebe colleagues completed the 5th silo tour. This cycle tour of approximately 100 km takes you past beautifully flowering potato fields, former potato flour factories and Avebe flour silos. One unique aspect this time was a visit to one of our members. Just outside Erica (Drenthe, the Netherlands) they were welcomed by member Gerben Germs. He gave a short tour, talked about his company and what Avebe means to him. The Germs family also had lunch ready. The group then continued their route and arrived back in Ter Apelkanaal feeling satisfied.



Innovation Award Want Want Group China

Avebe has received the 'Innovation Award' from Want Want Group China. This great achievement emphasises the valuable customer relationship. We have been doing business and working together on innovative solutions for over 30 years. Pitoyo, Regional Sales Manager, Dr. Chen, Global Principal Application leader and Edith Jiang, Technical Sales Manager attended the Want Want event where the award was presented. Avebe won the innovation award for the high-quality potato starch product it supplies for baby rice crackers. We are grateful to Want Want Group China for their appreciation.



Avebe colleagues on a working visit

German colleagues from our production site in Lüchow visited colleagues on site in Ter Apelkanaal. After a presentation by Matthijs Mallee, Process Technologist, an extensive tour of the location and the factory followed. The German colleagues saw a lot of similarities with their own locations, but were impressed by the size of the Ter Apelkanaal location. They had interesting discussions about successes and challenges in production during the presentation and tour. Many experiences were shared and it was a successful visit!

Listening & viewing tips

Leaders in Food



PODCAST: Listen to the episode of Leaders in Food. Our CEO David Fousert talks to podcast maker Joan Zijerveld about the important role of our potato starch and potato protein in the transition to a more plant-based economy.



Food Matters Live



PODCAST: Avebe is teaming up with Food Matters Live to create a series of podcast episodes exploring the amazing history, versatility and untapped potential of the potato. The potato plays a huge role in the global food industry and has been a key ingredient in many of our diets for centuries, but there is much more to the potato than meets the eye.



Filemon Wesselink



EPISODE: After twenty years of making television, Filemon Wesselink is ready for a new challenge. Job vacancy texts mean nothing to him. That is why he is being retrained for a new profession by Royal Avebe and fourteen other top Dutch employers. At Avebe we came up with a challenge to test whether Filemon has what it takes to work with potato starch.

The result? In any case, a whole new world of potato starch has opened up for him. He now knows the connection between bathrooms and potato starch. And what it takes to serve French fries with the right coating. Watch the episode of Avebe.



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