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Avebe MAGAZINE

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“We at Avebe are perfectly capable of responding quickly to suddenly changing circumstances”

In this time of corona, communication is more important than ever. Many employees are working from home and spending all day at their PCs. Work is in full swing at the production sites, but there, too, colleagues are maintaining more distance from each other.

It is perfectly possible to hold meetings via Teams, but you miss the personal contact and you hear a lot less about developments at Avebe. That's why this year's magazine is so important. It tells us about how others are dealing with the situation, also in other countries. We show you the annual figures: how did we perform last year? How about the new harvest? And the strategy?

The good news is that our figures for the past financial year are good, despite the very poor harvest and the difficulties in transporting our products to customers. It has been said many times before: at Avebe, we are perfectly capable of responding quickly to suddenly changing circumstances. By taking personal initiative and seeking out colleagues and working together. That's a great feeling. The feeling of working with people who care about what they do.

I hope you'll enjoy reading this year's magazine and that it won't be long before we can meet in person again.

A handwritten signature in blue ink, which appears to read 'Bert Jansen'. The signature is fluid and cursive, written on a white background.

Kind regards,
Bert Jansen
CEO Avebe

NEW AVEBE DISTRIBUTION CENTRE

EFFICIENT AND SUSTAINABLE CALLING CARD

The foundation has been laid: with an impressive capacity of two hundred cubic metres of concrete, the way is clear for the New Distribution Centre (NDC). With a tight planning schedule in mind, Avebe is working on the construction, furnishing and installation of the new warehouse at the Avebe location in Ter Apelkanaal. The NDC will be making an important contribution to sustainable logistics and serve as an example for other buildings that Avebe is adapting or replacing in the years to come to ensure a sustainable future.



MARCEL TRECHSEL | TEAM LEADER

The construction of the warehouse, which covers an area of no less than 22,000 square metres and is 15 metres high, is in full swing. And not without good reason: the completion date for the new warehouse is scheduled for the end of May 2021. This will add nine loading docks to the already existing seven at the Avebe Distribution Centre (ADC). Marcel Trechsel, Team Leader, is enthusiastic about the new warehouse he sees rising from the ground. "You see how the work is progressing every day," he says. "We started preparations in 2017. Together with M3 Consultancy, an external company with expertise in the field of logistics, we set out the requirements the new warehouse would have to meet and whether they were all feasible."

"With this warehouse, we're putting ourselves even more on the map."

Latest technologies

In the years to come, Avebe will be replacing or modifying a large number of what are in many cases rented old buildings to meet the latest requirements in terms of sustainability, cost savings and safety. The NDC is being built with the latest technologies

according to the sustainable standards of the future. This means energy-neutral, without a gas connection and with a buffer system that filters rainwater to prevent water nuisance and pollution. This makes the NDC a shining example for the other buildings.

Freight transport savings

The NDC is being built right next to the current ADC, which does not have enough capacity to store all derivatives such as dextrans. These products are still stored in external warehouses, and that requires transport kilometres: a driver sometimes has to pass through four locations for a customer order. In the NDC, Avebe will be keeping all the derivatives at one location and under its own management. That alone represents an annual saving of 50,000 kilometres in freight transport.

Customisation

Like Marcel Trechsel, forklift truck driver Martin Boltjes is also looking forward to the opening of the NDC. Even though he doesn't know exactly what shape his work will take yet. What he does know is that he will be working with the latest logistics technologies. He has no worries about the extensive automation costing him his job. "The current ADC will remain in place. The fact that we'll soon be storing and delivering all the products under our



MARTIN BOLTJES | FORKLIFT TRUCK DRIVER

own management means that we'll be able to efficiently deliver custom products to customers from various countries such as Saudi Arabia, Turkey and China."

Unmanned forklifts

The NDC will offer space for 38,000 pallets, which more than quadruples the site's total capacity. Derivatives will be transported from production to the NDC with a roller track of about 240 metres. Marcel Trechsel: "In the current situation, we pick up the pallets several times and move them with forklift trucks. That presents the chance of damaged bags and accidents. In the new situation we place the pallets in the storage racks. Four small unmanned forklift trucks place the pallets per delivery in rows ready for loading. Then we load the pallets with a manned forklift truck."

Calling card

The pallets will be transported from the DexTAK factory (dextrin factory in Ter Apelkanaal) automatically and connected to the existing outdoor AGV (automatic guided vehicles) infrastructure. This will reduce the transport movements of trucks on site. The NDC makes an important contribution to the image of Avebe, Marcel Trechsel expects. "It's definitely a calling card," he adds. "We process a local product, potatoes that come here in the immediate vicinity of the land. Many people have no idea about the process these products undergo. With this warehouse, we're putting ourselves even more on the map."

SOLAR PARK AT AVEBE'S SOIL CLEANING FIELDS

Construction company Avitec and Solarfields started in March with building solar park Vloevelden Hollandia in Nieuw-Buinen. The solar park is expected to supply electricity to more than 30,000 households a year as of December.

Solar park Vloevelden Hollandia is a joint project between Avitec, Solarfields and Avebe. The purpose of the project is twofold. As well as the solar park, the plots are also used for the storage of wastewater from our potato starch factory in Gasselternijveen. Surplus soil that comes with the potatoes from the field to the factory (tare soil) is processed around the solar park in a landscaped embankment. This guarantees Avebe's sustainable reuse of tare soil for more than ten years. The result? A reduction in transport kilometres and carbon and Nox (nitrogen oxides) emissions.



AVEBE PRESENTS PLANT-BASED SOLUTIONS AT NEW FOOD CONFERENCE

Avebe attended the ProVeg New Food Conference organised by ProVeg in August. Business Development Manager Food Gert-Jan Klijnstra gave a presentation about our plant-based solutions.

Nearly 400 people from some 51 different countries signed up for this. The online event was attended by 120 participants. The subject of the webinar was: 'The 2nd evolution of plant-based products and the role of high-quality ingredients'.

Gert-Jan began his presentation by explaining that it is no longer enough to produce meals that are only free of ingredients of animal origin. Consumers are also looking more and more critically at what's on the label. Clean and/or clear labels are a rising trend. If the label is not convincing, people will leave products on the shelf. However, it is the final product quality that determines whether a product is purchased a second and third time.

Gert-Jan explained that Avebe's Perfectasol enables food producers to come up with high quality plant-based products without compromising on flavour and texture. Gert-Jan explained various concepts for plant-based dairy alternatives and presented Avebe's solution for replacing gelatine in confectionery.

Although the presentation itself lasted only fifteen minutes, the number of questions that followed was overwhelming. In the coming period we will see what this has yielded in terms of new customer requests. Either way, we have already been invited to speak at the New Food Conference in Berlin in April next year!

ONLINE SOFTWARE SOLUTION STREAMLINES FACTORY PLANNING

Mendix, world leader in 'low code' for enterprises, has developed the software solution 'Internal Starch Flow' for Avebe. Low-code is a visual development approach that allows developers to quickly create applications for web and mobile. The software solution Internal Starch Flow is designed to streamline the internal planning processes and the logistical processes in the factories.

Internal Starch Flow prevents unnecessary transport delays by matching the shipment of potato starch and potato protein to the factory that is most suitable for processing these products. The software solution also significantly reduces production delays. Ultimately, this solution also contributes to an optimal performance price for Avebe's members. "An operator used to walk to the silo to measure the amount of starch to be extracted. With Mendix, we have automated this process in a smart and innovative way," explains Gijs Bleeker, IT director at Avebe.





ROYAL LOGO ON OUR BUILDINGS





BJÖRN AHRENDT

MANAGER OPERATIONS, DALLMIN

How have you experienced the recent situation?

“Corona has put us all in a unique situation that none of us has known before. Some of my colleagues have worked from home since mid-March because they were able to carry out their tasks from home. For me, working from home wasn't an option.

As Manager Operations at the Dallmin production site, I'm not only responsible for the smooth running of production processes, I'm also the personal point of contact for colleagues who have ensured that production remained at the same level and that Avebe was able to continue to meet market demand. In the first few weeks in particular, we experienced the big demand for goods with longer shelf-lives based on our ingredients, such as frozen foods or noodles.”

“For me working from home was not an option.”

How has corona changed your work and your workplace?

When the corona pandemic broke out in March we had to formulate measures as soon as possible to avoid the worst case scenario in which the entire site would have to be quarantined. We came up with hygiene measures, including social distancing rules, wearing face masks for distances of less than 1.5 metres and disinfection facilities. We also drew up a protocol for dealing with drivers and employees of external companies on our site. Also, everything had to be clearly communicated both internally and externally. The Dallmin production site is located in Prignitz. I'm from Mecklenburg myself and our infection rates are extremely low. If you are not immediately confronted with the risk in your own environment, there's a temptation to move closer together again. It's important to raise awareness of corona every day to protect yourself and others.”

AVEBE AND CORONA

For almost a year now, the coronavirus has been having a major impact on our work and private lives. Five colleagues talk about their experiences.

ROELOF MESSCHENDORP AND JAN WESTERLING

FORKLIFT TRUCK DRIVERS, FOXHOL

What makes your job challenging these days?

“At first it was barely possible to buy enough disinfectants or mouth caps. And because the first delivery periods were so long, we were forced to take extra strict measures. The prompt availability of company equipment and replacement parts also proved to be a problem because suppliers had applied for reduced working hours. Despite that, we had to deliver our products on time without endangering our employees. Implementing the regulations in my areas of responsibility wasn't always easy. Meetings had to be held using new media, such as Microsoft Teams. We all had to get used to that at first, we missed the personal contact with colleagues.”

Can you tell us anything about the measures taken in your country?

“In Germany, very drastic measures have been taken: the lockdown last spring has changed our day-to-day lives and we have all had to adapt. We have learned that by implementing the corona rules, such as mouth and nose protection, keeping your distance and hygiene rules, you can protect yourself and others.

Roelof Messchendorp and Jan Westerling have been forklift truck drivers at Avebe for many years. Although they have both also worked at other locations, they find Foxhol perhaps the most pleasant location to work at. “We know most of the colleagues in Foxhol”, says Roelof. “Our job involves taking finished products from the production lines and placing them in building 58/59. This is where they're made ready for transport to our customers.” “That makes it important,” says Jan, “to make sure that the pallets of bagged goods or big bags are stacked neatly and straight, so that when the sold products are delivered they can be put into the container for the customer just as neatly.” The world has changed since the outbreak of corona. That is no different at Avebe. Jan and Roelof are glad that they could simply go to work every day as usual. “Actually, there haven't been any major changes in logistics. But these days we're only allowed to take a break in the canteen with a maximum of five people, there is disinfectant liquid at the doors and

there is less personal contact with people like the operators in the factory. As long as the factories produce, we take care of the processing of the finished product.”

In their private lives, Jan and Roelof also comply with all recommended measures. Roelof misses regularly eating out. “It's much harder and less enjoyable to go out for a meal with a group than it was before. The measures Avebe has taken may be strict, but they are also clear. But it's important that we continue to confront each other if we ever stray from the rules. We especially have to remind drivers, who of course come and go a lot at logistics, about the measures.” Jan says you might even be more at risk outside Avebe than at the location. In many places we have clearly marked out the walking routes and how many people are allowed to be in a room. What they both regret is that the department outing was cancelled this year because of corona. “This has always been great fun for all these past few years. Hopefully we'll still be able to organise an outing with the Logistics Department this year.”





“I do 90 percent of my work from home, so not much has changed for me in terms of my daily workplace.”

TIBET TURGUT

SALES MANAGER FOOD, MIDDLE EAST, TURKEY AND SOUTH AFRICA

How have you experienced the recent situation?

“At the end of January 2020, I had customer meetings with my colleague Mel Tüzün in the United Arab Emirates when we first heard about the corona outbreak. People started buying face masks and the alarm bells started ringing. At that time we could get back to Turkey without any problems, but after that the number of infections quickly increased and all flights were cancelled. In Turkey we faced a curfew at weekends and on national holidays to prevent people from getting together.”

How has corona changed your work and your workplace?

“I do 90 percent of my work from home, so not much has changed for me in terms of my daily workplace. I keep my house and workplace clean and sterile and I treat visitors and the things that come into my home with care. The biggest impact is suddenly not being able to travel anymore because of corona. I was planning to go

to South Africa, Lebanon and the United Arab Emirates to take up opportunities and projects, but it was all cancelled.”

What makes your job challenging these days?

“Project management in particular suffered from the corona crisis. Most customers focused on normal production in terms of time and priorities. And in our region it is very important to be able to look each other in the eye when doing business and discussing details, especially in projects. That's the biggest challenge I face. To deal with that problem, I arrange monthly online meetings with our distributors, where we discuss the projects and their progress in detail. I also do whatever it takes to communicate remotely with customers; phone calls, WhatsApp discussions, emails etc. The bottom line is that normal sales just keep going and we are successfully managing them remotely, while new projects are a bit of a challenge in this time of corona.”

Can you tell us anything about the measures taken in your country?

“The corona measures in Turkey focus more on those aged 65 and above as a risk group. They must always indicate where they have

been and need permission for their journeys. A start was made with normalising public transport, domestic flights, cafés, restaurants, sports, etc. from 1 June. Face masks are compulsory on the streets and in enclosed spaces. Some international flights are allowed - depending on the policy of the country of arrival - and when returning to Turkey you may have to spend two weeks in quarantine. Personally, I follow all precautions to the best of my ability. That's what they call the '3 precautions': face mask + distance + hygiene. In our office we have disinfectants in every room. The incoming shipment boxes are stored in a separate area and are first sterilised. We also measure the body temperature of visitors and employees. Finally, I also had to postpone my plans for the sponsorship project 'Avebe in Society'. I wanted to form an Avebe volleyball team, but indoor sports are very risky at the moment. So now I'm planning to initiate an official beach volleyball tournament for veterans in Izmir. The risk is lower because it is an outdoor activity and because the number of players is smaller.”

JAGDEEP SINGH

ACCOUNT MANAGER INDUSTRIAL SPECIALTIES SINGAPORE

How have you experienced the recent situation?

"I've always worked from the office, so I had to get used to working from home. I miss the daily interaction with my colleagues and the conversations in which we covered everything from work-related matters to audio, gadgets, music and family. I also miss having my own space at home where I can concentrate and think. With four daughters studying, things can get chaotic at home! But in the end, we all managed to adapt and discovered the many virtues of tolerance. Occasionally I even get a cup of coffee or tea from one of the girls (if they want something from me of course). Still, it's nice to have my family around. It's a completely different work setting."

"In a highly technically oriented sales position like mine, face-to-face talks are invaluable"

How has corona changed your work and your workplace?

"My bedroom is my office and my office is my bedroom. In Singapore the houses are quite small. In the morning I fold up the sofa bed, unfold a table, get a chair out of the dining room and VOILA! An instant office. At the end of the day I repeat this process in reverse order and SHAZAM! A bedroom again. A big advantage of working from home is that I get three to four hours a day that I would otherwise have spent travelling between work and home. I make much more use of video communication for consultation with colleagues, sales reps and clients. This is the best alternative to face-to-face conversations and has the

positive side-effect that there is much more communication between team members, both business and social. The frequent use of video communication has really helped the Industrial Specialties team to grow towards each other. And a closer, well-connected team works better."

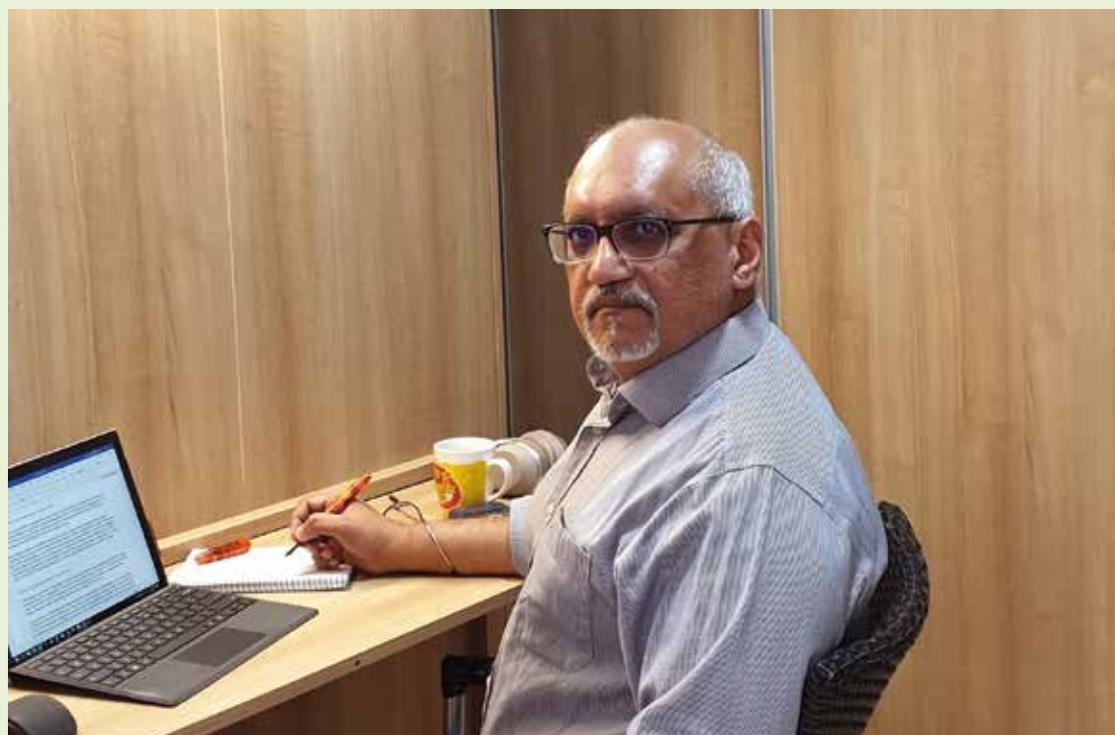
What makes your job challenging these days?

"In a highly technically oriented sales position like mine, face-to-face talks are invaluable because you can pick up subtle changes in the customer's body language and respond to the vocal signals during the talks. That makes it easier to introduce new concepts, ideas or products. Clients generally relax more during such conversations and that often results in a bond and a basis of trust. We now take a completely different approach to try to achieve the same results as during face-to-face conversations. We have to be much more formal and careful about what we say and how we convey things. We have to ask a lot more questions to get information. This can cause the meetings to appear cold and dry. Promoting new concepts and products has become a

much bigger challenge. We can't get together to brainstorm with a whiteboard. It's very difficult for us to come up with new ideas and sometimes we don't even know if they're listening to us. I suppose that all in all we have to make about three times the effort."

Can you tell us anything about the measures taken in your country?

"In Singapore, the government has taken a very conservative approach to controlling corona, paying close attention to the economic and social impact of the measures. It's interesting to see that the people of Singapore seem to have accepted the new normal. Everyone wears face masks, keeps to the 'social distancing' rules and stays home as much as possible. If you don't, you can count on being confronted on the streets and told to wear a face mask or keep your distance. Travelling is still advised against. Fortunately, in Singapore – a paradise for people who love good food – measures have been taken to make it possible for eateries to open, provided, of course, that all the necessary precautions are observed. This has taken some of the pressure of always having to stay at home off."



AVEBE PRESENTS BINDING AND BUILDING 2.1

“WE’RE AT POLE POSITION AND NOW NEED TO PUT OUR FOOT DOWN”

Binding and Building 2.1 is not a new strategy, it is an acceleration of the existing one. But why does Avebe need to accelerate? Lidia Mulderije, Anu Mahabir, Mark Tettelaar and Michiel Puttman had a virtual meeting to discuss what course to take from here.

Mark Tettelaar explains how the 2.1 version of the strategy came about. “When we developed the Binding and Building 2.0 strategy, two scenarios were considered. One of them was a variant with higher investments. That was the scenario that aimed at a performance price of 100 euros per tonne. Once we had calculated the investments, we concluded that the investments would have a big financial impact on our ratios. As a cooperative, we are judged on aspects such as our debt and equity ratios. With an investment level of 60 million euros, these would have fallen beneath a certain limit. In consultation with the Supervisory Board, we decided to move ahead with another variant with an investment level of 45 million euros a year. We could achieve that without disrupting these ratios.”

High performance price

“But then things changed,” he continues. There were two poor harvests due to drought and both years the performance price was higher than the target performance price of 95 euros in 2023. Mark: “We think we can be more ambitious because of the good

MICHEL PUTTMAN | MANAGING DIRECTOR COMMERCE



opportunities to create more value. Also, it does more justice to the rising costs of cultivation for our members. So we took the other variant back off the shelf.”

“There are currently enough projects underway to help us achieve our strategic goals.”

Putting our foot down even more

Not only was the rising performance price an important motivator for the change: Avebe also sees great opportunities in the changing market for food proteins. “The market for plant-based proteins is growing enormously,” explains Michiel. Customers are queuing up for our products. And that calls for more investments. I see Binding and Building 2.1 as Binding and Building 2.0 with our foot down. We just want to move faster. The additional investment isn’t investment for its own sake. We’re responding to enormous demands from



LIDIA MULDERIJE | SALES AND OPERATIONS PLANNER, STRATEGY COORDINATION OFFICE

the market. ‘Plant-based meat’ and ‘plant-based dairy’ are important themes that are calling for a lot of attention.”

Four pillars

That makes it a familiar strategy, including putting our foot down on the accelerator. Lidia briefly explains the basis of the strategy. “We have four pillars in the strategy: ‘growth in good food’, ‘market-oriented sustainable potato growing’, ‘reducing our ecological

footprint in our factories’ and ‘working together for the customer’. Over the past two years, we’ve made progress in all these areas. There are currently enough projects underway to help us achieve our strategic goals. We’re planning to invest more in certain projects.”

Expansion of Solanic

One of those projects is the expansion of the Solanic line in Gasselternijveen. “To better meet the demand for Solanic (potato proteins) in the future, we are setting up a second Solanic 200 line,” explains Mark. “That’s a big investment because we’re also going to build a new spray-drying tower. The total investment will be around 40 million euros. A huge amount, but despite that, it’s an interesting business case.”

Michiel: “We have to seize opportunities in the market before alternatives present themselves. Now is the time. Avebe has pole position in terms of products and texture. But having ‘pole position’ also means that we have to go faster at a certain point, otherwise it won’t help you. Now is the time. Now we have to go full throttle. It’s great that we are now able to make an extra investment to follow the market.”

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ANU MAHABIR | STRATEGY COORDINATION OFFICE



>> **Clean label starches**

Anu mentions another part of the ‘good food’ pillar with a lot of potential: clean label products, an expansion of our existing starch portfolio. A number of development projects are underway in the field of clean label starches. Those are starches without e-numbers. Michiel adds: “Good nutrition also goes beyond proteins. Our starch application Etenia, for example, can replace gelatine. We can use it to make products completely plant-based. This enables us to contribute to the market for plant-based products, and that’s an important theme of our strategy.” “We have a unique position in this,” adds Mark. “Our starches are protected by patents against possible competition and are less subject to fluctuations in the commodity market. Contrary to what was thought in Binding and Building 2.0, plenty of attention is also being paid to the paper market,” says Mark. “We decided in the previous strategy not to make any more investments in this market. Now we’re seeing new opportunities arising here, especially in the field of environmentally friendly food packaging.”

“It is vital to monitor the progress of the strategic programmes and make timely adjustments”

SCO

The Strategy Coordination Office (SCO) also has an important role to play in implementing the refined strategy. “The SCO ensures that we continue to take a structural approach to the strategic projects,” says Michiel. “All the daily work makes it a bit of a challenge to maintain an overview. So their support for us is extremely valuable. A lot of emphasis is placed on cross-functional collaboration.” Mark agrees with Michiel. “We as Avebe are



MARK TETTEELAAR | MANAGING DIRECTOR OPERATIONS

now choosing to invest 60 million euros in our strategic projects in the coming period. Over a turnover of 600 million euros, this is a significant amount. It is vital to monitor the progress of the strategic programmes and make timely adjustments.”

More than spreadsheets alone

“Since it started out in 2018, things have changed quite a bit at the SCO,” says Anu. “At that time we still had to find our place within the organisation: now we’re an organisational and strategic partner for the board and the programme managers.” There’s a lot of added value, according to Mark. And that’s more than welcome, Lidia responds. “We do more than make spreadsheets! The board has given us a good deal of freedom to do things our own way. That gives us a lot of energy.”

Unique product

All the people at the virtual table agree: it will be a dynamic period for Avebe. Full of challenges around the strategic projects, investments, attracting new customers and

of course corona. But the mood is definitely positive. Mark: “Looking at the world around us, we see that we have a good starting position. And that potato, well, of course it’s still a unique product!”



On 11 August 2020, the first potato supplier reported to the terminal of the Avebe production site in Dallmin on 9 a.m. sharp. The potatoes were sampled and yielded a good starch content of more than 19%. On the first day of the campaign, the quality of the raw product was good and the starch and tare values were fine.

GERMANY STARTS CAMPAIGN WITH **RENEWED INTAKE SCHEDULE**

On 24 August, the first potatoes for the new campaign were delivered to the production site in Lüchow according to schedule. The average starch content on the first day was more than 20 percent. The raw material quality and tare values were also good.

A-Volume

From this campaign onwards, all potato growers, as in the Netherlands, are divided into several rounds for the delivery of starch potatoes on the basis of a fixed intake schedule. The delivery-schedule is based on the A-volume in tonnes of starch selected by the grower in the previous spring.

Periods

The campaign consists of several periods: a period for early delivery, direct delivery, delivery from potato storage pits and delivery from barns. These periods are in turn subdivided into rounds. A round generally lasts two to three weeks. The introduction of this new system of several rounds is intended to result in greater transparency during the campaign period, leading to better planning certainty for all concerned. Potato growers already know before the campaign whether their quantities are classified as early, average or late. The principle of rotation (early,

average or late) already allows them to estimate how they will be classified in the next campaign.

At www.avebe-kpw.de and the member and supplier portal everyone can see which round of the campaign they are placed in.

BINDING AND BUILDING: WORDS AND ACTIONS

Add as much value as possible to the starch potato. That is the starting point of Avebe's strategy. A strategy in the interest of growers, customers and employees alike. This is all based on committed and motivated employees who constantly learn and put the customer first. They are committed to growth in good nutrition, market-oriented and sustainable potato growing and to reducing the ecological footprint. The following three programmes that we – as the world's largest and most innovative starch and protein producer – use to achieve our objectives, demonstrate that it is not just about big ambitions.

GOOD FOOD

The main value of potato starch is found, more than in industrial applications, in food. Even more value can be achieved with 'Good Food': Avebe's plant-based alternatives for meat and dairy. You could say that 'Good Food' is the crème de la crème within the food segment. Literally and figuratively, because the combination of potato starch and potato protein in products such as plant-based feta cheese, cream cheese and chocolate desserts

replaces milk fat and milk protein without losing the creamy taste of cheese, yoghurt and desserts. Mouthfeel and texture are also very important in plant-based confectionary and the plant-based alternatives to meat, such as firm and juicy hamburgers. In plant-based meat, our Solanic protein replaces the chicken egg protein that turns the chunks of soy and wheat proteins in meat substitutes into a single product. It is clear that potato

protein is by no means inferior to milk protein in terms of nutritional value: it contains amino acids that are important for building muscle. With this in mind, Avebe is working on new product/market combinations in collaboration with its customers.

New Food Challenge

Potato protein will not compete in price and quantities at the same scale as soy protein and wheat protein. And nor is that in any way Avebe's ambition. Nevertheless, the combination of potato protein and potato starch has the potential to create a meat-like structure. With the 'New Food Challenge', Avebe will focus on the higher segment and customers wanting to supply consumers with gluten and soy-free products. "We always look into where the optimum value lies for our members," says Bart Pennings, Director Business Development. "Consumers in Europe and North America in particular are looking for plant alternatives to meat and dairy, from health, environmental and animal welfare points of view. A good example is the launch of an all plant-based cordon bleu this autumn in Germany, with plant-based cheese, which contains both Avebe's potato starch and potato protein. We want to expand the value of our products over the next years. We are now mainly offering protein and starch combinations as a single ingredient. That's how we create optimal value for our customers and members. And who knows, we may develop potato varieties with a higher protein percentage in the future, so that we can even better meet the needs of the market. That's something for the future."



BART PENNING | DIRECTOR BUSINESS DEVELOPMENT

SUSTAINABILITY IN THE FIELD

Actually, Jans Klok wanted the growers to visit the trial fields three times this year, but the coronavirus threw a spanner in the works. “Fortunately, we can now visit the trial fields again in small groups,” says the Avebe’s Coordinator Knowledge & Development Agro. With the ‘Sustainability in the field’ programme, Avebe informs its growers in an easily accessible way about tests for sustainable potato cultivation. During the regular trials on the two-hectare site, a special trial field was laid this year. Jans Klok: “We find it important to share the results in a simple way so that growers can work with them as they want to. Sustainable cultivation starts with the choice of variety and then determining your level of sustainability in the choice of crop protection, for example.” The objectives of Avebe’s strategy for 2023 are a higher yield per hectare with less environmental impact: a yield increase of 500 euros per hectare, 10 percent more potato starch and potato protein from a hectare, 10 percent less environmental impact per tonne of starch and a 10 percent reduction in carbon emissions.

Varieties

An older variety that is still grown most often is Seresta. However, this starch potato needs a relatively large amount of nitrogen and is susceptible to the potato disease phytophthora. According to the trials, the new Avenger variety, which has just come on the market, can help to achieve substantial

JANS KLOK
COÖRDINATOR KNOWLEDGE
& DEVELOPMENT AGRO



“A variety has to suit a plot of land: there are factors such as storability and delivery period that are also decisive.”

savings. For example, this variety requires 60 kg less nitrogen per hectare than Seresta and five treatments against phytophthora are sufficient. That’s nine treatments fewer than Seresta.

This means considerably less use of crop protection agents and less diesel consumption. That in turn leads to a reduction in carbon emissions of 23 percent up to 40 percent less environmental impact from crop protection and 350 euros in cost savings, with the same annual yield.

Storability

Promising results, although Klok does not by any means conclude that all growers

should now grow Avenger: “A variety has to suit a plot of land: there are factors such as storability and delivery period that are also decisive. Averis is busy breeding new varieties that are sufficiently resistant to fungi and pests, but the development of such a variety takes an average of eight years. For the time being, there still aren’t enough varieties that meet the desired requirements, but with these first results we are on the right track.” The progress made with making potato growing more sustainable is monitored over the years using the Optimeel crop registration system. >>



ERIK KOOPS | INVESTMENT, DEVELOPMENT & PORTFOLIO MANAGER

CO₂ AND THE **ENERGY REDUCTION PROGRAMME**

One of Avebe's other strategic pillars is reducing its ecological footprint. Erik Koops, Avebe's programme manager Energy Efficiency, tells us about two striking projects.

DUCAM project

The DUCAM project at the Ter Apelkanaal site has led to a substantial reduction in carbon emissions and energy costs through the sustainable concentration of potato juice using membranes.

To extract valuable components such as proteins, the potato juice first has to be boiled. Together with a partner, Avebe developed a process that uses membranes to concentrate the juice first. Now only a third of the potato juice has to be boiled. After that, only half of the remaining water is evaporated. The project called for an investment of 17 million euros and a factory conversion. The project was carried out with a Top Sector Energy Subsidy from the Ministry of Economic Affairs.

The DUCAM project reduces the carbon emissions of the Ter Apelkanaal site by about 10 percent. This makes a substantial contribution to the objective of reducing the

carbon emissions of the whole of Avebe by 12 percent in 2023 compared to 2017/2018. This is also in line with the government's requirements to reduce carbon emissions by 30 percent in 2030 and 50 percent in 2050. Erik Koops: "Our challenge is to ensure that these substantial investments actually lead to the desired reduction of carbon emissions and energy consumption. Last year the campaign was shorter than usual due to a poor harvest, which meant that we have not yet been able to achieve all our objectives. In the past inter campaign, some optimisations were introduced and we expect that the project will be brought to a successful conclusion."

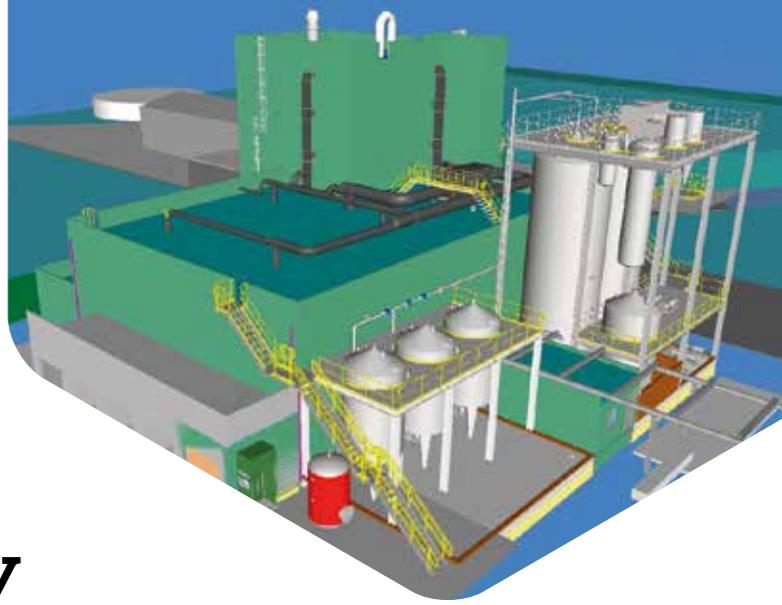
Solar park

The second striking project that Erik Koops mentions is the solar park on the Avebe soil cleaning fields.

Nieuw-Buinen is home to the largest solar park in the Netherlands with a total area

of one hundred hectares and 300,000 solar panels. Half of the solar park will be installed on the Avebe soil cleaning fields. "The panels have a height of 2.5 metres, so that we can continue to use the soil cleaning fields as a water buffer for the Gasselternijveen location. We also purchase half of the green energy generated by the solar park," says Koops.

"Green energy will be used for equipment such as electric boilers. These boilers will be placed near the current gas-fired boilers." The Swedish location Stadex is being equipped next year with an electric boiler that will run on green energy from hydropower. Ter Apelkanaal and Gasselternijveen will follow with energy from the solar panels. The idea is that the electric boilers ultimately pay for themselves.



START OF CONSTRUCTION NEW POTATO PROTEIN FACTORY IN DALLMIN

In August, construction of the new potato protein factory started at our location in Dallmin (Germany). This factory stands out for the sustainable production of products based on starch potatoes.

In our production process, the potatoes are washed and ground, after which the solids, such as starch and fibres, are separated from the released potato juice. After this, the potato juice only contains soluble components, including the potato protein. Up to now, the potato protein was not extracted in Dallmin: the potato juice was used as a fertiliser on farmland.

Good effect on production costs

In recent years, the need for storage facilities has risen sharply as a result of stricter rules imposed by public authorities on agricultural fertilisation in the autumn. For that reason the potato juice is now stored in reservoirs from mid-October until it can be used as fertiliser again in February. The extraction of potato protein has a favourable effect on

financial results of Avebe. A saving of around 30 euros per tonne of starch on production costs is achieved by extracting protein in our factory in Lüchow, which does have a protein extraction plant.

DUCAM UF technology

The technology for extracting potato protein is becoming increasingly sustainable, especially in terms of energy consumption. Dallmin will soon be using the new DUCAM UF technology, which is already being used at the Ter Apelkanaal site. The ultrafiltration plant (UF) increases the concentration of protein in the potato juice. That means that, compared to the traditional process, only about a third of the energy is needed to coagulate the protein. The project also takes account of upcoming standards, such as lower dust emissions from the dryer.

Subsidy

Construction began on 24 August 2020. Completion and commissioning of the protein plant are scheduled for the start of the 2021/2022 campaign. For reasons to do with its excellent energy efficiency, we are receiving a subsidy from the federal state of Brandenburg and the Federal Office for Economics and Export Control (BAFA) for the construction of the plant.



ALSO IN AUTOMATION NOTHING HAPPENS AUTOMATICALLY

Together with his team, Wim Vermeer, Manager Infrastructure Support, made sure that all Avebe employees were able to continue their work effortlessly from home. He laughs when asked about the success of the approach. “In the last five years, we’ve never had so many compliments about our work as we have in the last few months with the corona outbreak,” he explains. “That’s mainly because now everyone in Avebe can see what we’ve always been doing.”



WIM VERMEER | MANAGER INFRASTRUCTURE SUPPORT



HOME-WORKING TIPS

BY HR CASE MANAGER ALIEKE REIMERT AND OUR NEW OCCUPATIONAL HEALTH AND SAFETY SERVICE ARBO UNIE

Technically, the team was already reasonably well prepared for working from home, Wim explains. “Employees around the world have been working at home for Avebe for much longer. We had already made all the arrangements for them. In the spring, it mainly came down to having to provide almost everyone who had to work from home with laptops.”

Coincidence

Nothing special about that, Wim Vermeer seems to be saying, but the team was ready for the new way of working well in advance and was very well prepared. “Actually, that, too, was by coincidence,” says Wim. “Last year Microsoft announced that they were stopping Skype for Business so we immediately started a project to get the organisation ready to work with Teams. In December 2019, we had completed all the installation work: we had organised information sessions and provided training, and the technology and applications were ready. The hardware, such as laptops, had to be updated and made ready for use. We also made the IT portal more user-friendly. This allows employees to order headsets and other supplies to set up their workstations properly. That everything worked properly right from the start is perhaps the most satisfying aspect,” reflects Wim Vermeer. “There was no one who was unable to continue their work. In fact, it was pretty much business as usual.”

Hybrid cameras

Vermeer’s team is now focusing on the next phase of the new way of working: meeting rooms will be equipped with hybrid cameras so that employees can also participate remotely in presentations, training sessions

- 1 Arrange a good, ergonomically designed workplace. Much is possible at Avebe, check the corona page on intranet for information.
- 2 Regularly change your work posture, stay relaxed and take an active break.
- 3 Look at your work style at home, think about your breaks, take a walk every now and then and use your breaks also to maintain social contact with your colleagues.
- 4 Exercise and do enough sports, and eat healthily (this applies of course to all colleagues).
- 5 Don't keep complaints to yourself, inform your manager, the company doctor or physiotherapist.

“There was no one who was unable to continue their work.

In fact, it was pretty much business as usual.”

and meeting sessions. “For the time being, not everyone will be able or required to get together for meetings like this. We also facilitate that, so that the sessions are accessible and run smoothly.” All members of the IT Infra team, contribute ideas about useful

applications in the constantly changing work environment. “We have an inventive team,” Wim explains. “That’s good, but it can also be tricky. That takes up a lot of time and energy. We may work in automation, but nothing happens automatically.”

LESS DROUGHT AND **BIGGER** **HARVEST**

1

MATTHIAS SIEWERT
ARABLE FARMER IN TREBEL, GERMANY

“The season started according to plan. The fields were very workable and we were able to start planting on time. The seedlings were of good quality and significantly better than last year's.”

Late frost

“Our region in the east of Lower Saxony often suffers from late frost, and the area around our farm is colder than average. We weren't spared the late frost this year, either. However, we were lucky here because we hadn't planted too early. Potatoes that had already started to grow remained largely undamaged. Some plots showed slight frost damage, but they recovered very well in the course of the season.”

Less problematic

“In general, the plants developed very well in the spring. The drought was less severe compared to previous years. A few warm days and significantly more rainfall allowed us to reduce irrigation. In general, we irrigate all our areas - for maize, sugar beet, grain or potatoes. The light and sandy soil means that a drought always hits us particularly hard. This year the situation was a little less problematic.”

Phytophthora

“The rain also caused us a significantly higher Phytophthora problem this year. We were hit by this potato blight, which started in the spring. We had to use crop protection more intensively and at shorter intervals. We were under pressure throughout the season.”

Good harvest results

“Still, I'm very happy about this season so far. The improved rainfall situation has ensured that all the plants are developing optimally. The plants are healthy despite the intensified blight problem. We started lifting the harvest in mid-September. The first tests, however, already show considerable yields. The starch content of the potatoes is also convincing and certainly higher than last year's.”

MATTHIAS SIEWERT

Has an arable farm of 140 hectares in Trebel, Germany. Here he grows 47 hectares of potatoes, maize, grain and sugar beet.

The growing season of 2020 was another one that presented challenges. Late frost, drought and higher Phytophthora pressure; none of them passed us by this year. A Dutch and German grower summarise their growing season.

2

ARJEN JAKOBS ARABLE FARMER IN WEZUP, THE NETHERLANDS

“The year started a bit wet, but it dried up quickly. We were able to start working in the fields quite easily, but the cold spring meant that growth wasn’t really properly underway yet. That changed in May. Then temperatures rose and the crop grew rapidly.”

Extreme hot weather

“Pretty soon we were facing drought. But we didn’t have to irrigate straight away. That wasn’t necessary until after the longest day. But the extremely hot weather around 10 August caused most damage, the crop matured too quickly. We have now (end of September) delivered the first potatoes to Avebe. The potatoes came from fields that suffered most from the heat and drought. This harvest was disappointing, both in terms of yields and the starch percentage. Still, I expect the potatoes from the other fields to do better.”

Not a top year

“In terms of yield, 2018 and 2019 were bad years. In 2018 it was extremely dry, in 2019 the underwater weight was disappointing. This year I expect a better yield than the past two years, but it won’t be a top year. Not like 2017, that was a great year. There are bound to be some good fields among them now, but that’s it. After two bad years, we could also do with a better yield. As an entrepreneur you always have a buffer, but that’s starting to run out more and more. Hopefully in 2021 we’ll be able to leave the irrigation hose in the barn...”

Investing in soil

“Over the past few years, the price of land in the region has continued to rise. I would like to further expand my acreage of starch potatoes, but with these prices I choose to rent rather than buy. I invest extra in my soil, for example by using roadside grass as compost. That way I can just get a few tons more per hectare out of my land. To spread the financial risk a little, I’ve expanded my contract work and acreage of onions. Growing starch potatoes is and remains my main activity. At least, for now. The thing is, you can make a pretty quick profit with onions now.”



ARJEN JAKOBS

Has an arable farm in Wezup with his mother. On 75 hectares he grows starch potatoes (38 hectares), onions (20 hectares), sugar beet (14 hectares). He also has 3 hectares of grassland.



“TO US, AVEBE IS THE PERFECT PARTNER”

Jan-Wilhelm Schorling is a potato grower in Lower Saxony. The arable farmer has been working with Avebe since 2013. Using Optimeel cultivation registration and sustainable cultivation strategies, Jan-Wilhelm Schorling prepares its companies for the future as well as possible.

In 2016, Jan-Wilhelm took over the management of the family business in Lower Saxony from his father Ernst Wilhelm Schorling. On his home plot of 120 hectares, potatoes are his main crop (70 hectares). As well as potatoes for the production of crisps and French fries, he also grows starch potatoes. Together with a partner in Saxony-Anhalt, Jan-Wilhelm has had a second company with 260 hectares since 1990. In 2019, his partner took over an adjacent farm in Saxony-Anhalt, which means that together they now cultivate a total of 1,200 hectares of farmland. Jan-Wilhelm also mainly grows potatoes in Saxony-Anhalt. Starch potatoes are grown here on 80 hectares. Part of this

crop consists of what are known as waxy potatoes, starch potatoes containing pure amylopectin starch. In addition to potatoes, sugar beet is another main crop of Jan-Wilhelm Schorling's companies.

Soil analysis

“Potato-growing is at the heart of our family business. We're very proud that we have also been able to introduce potato cultivation at our second farm in Saxony-Anhalt. In recent years we've succeeded in introducing field-specific tillage in addition to non-current tillage. We analyse the soil and base our fertilisation on soil maps. That is giving us very good results. The logical next step is direct sowing.”

Biodiversity

Sustainability is an important theme at Jan-Wilhelm Schorling's farms. “We've made a conscious choice to switch to non-turning tillage. This is the key to a better soil structure, as it reduces nitrate leaching and promotes the storage of CO₂ in the enriched humus layer. This is also shown in the harvest cards that we've been using since 2003. We sow strips along crops and field edges with mixtures of flowers and herbs. That way we not only increase biodiversity, but we can also actively protect our crops and reduce the use of fertilisers and crop protection products.”



JAN-WILLEM SCHORLING

Sustainable

The entrepreneur uses the latest spraying technologies to enable the sustainable use of crop protection agents. "By using field-specific fertilisation, we have succeeded in reducing our use of fertilisers by 2 to 4 percent. All in all, since 1990 we've been able to enrich the humus layer on our plots by 1 to 1.2 percent. This layer is capable of effectively storing CO₂."

Nematodes

The dreaded nematodes are no problem on his farms, he explains. "In healthy soil with sufficient natural enemies, nematodes are automatically controlled. We also focus on fertilisation under the tuber. As a result, we suffer less from leaching and this leads to higher efficiency. We've also completed a number of trials with the plot-specific cultivation of starch potatoes, which Avebe advised us on."

Exchanging experiences

Jan-Wilhelm Schorling has been working with Avebe since 2013. "It's especially the very good organisation and advice that make Avebe the perfect partner for us. Avebe takes the

"The contact with other Optimeel participants is also extremely useful to us"

organisation of the entire logistics around potato cultivation - from potato heap to factory - out of our hands. For this purpose, Avebe engages local machinery cooperatives or contracting companies. This is a great advantage for us and considerably lightens our working day." Since 2018, he has also been working with Optimeel, Avebe's cultivation registration program. He sees this first and foremost as an excellent opportunity to further optimise potato growing. "The extensive evaluation of data is an important additional source of information for us. We know which plot the potatoes originate from in each lorry load of delivered potatoes. That makes it possible to assess the yield with great precision. The contact with other Optimeel participants is also extremely useful to us. At times like these, experiences are exchanged extensively and that is very valuable to us."

Virtual demo fields

The demo fields of Avebe are also a very important source of information for the arable farmer. This year not live, but virtual. "The virtual concept promotes the dissemination of information and has proved to be a good alternative to demo days, especially in this time of corona. I can now view the fields at my leisure from home and don't have to travel that far anymore. Very convenient. On the other hand, because of the different circumstances at the various companies, it is sometimes difficult to take practical and relevant advantage of it."

AVEBE IN FIGURES 2019 2020

solvency

	2019/20	2018/19	2017/18	2016/17
group capital	205.5	203.7	203.6	202.4
borrowed capital	284.9	269.7	263.1	211.0
total capital <small>including provisions</small>	490.4	473.4	466.7	413.4
solvency	41.9%	43.0%	43.6%	49.0%

ACCIDENT FREQUENCY




THE NUMBER OF ACCIDENTS PER 1000 EMPLOYEES IN WHICH MEDICAL TREATMENT WAS SOUGHT

SICKNESS

absence **5.6** PERCENT



number of employees

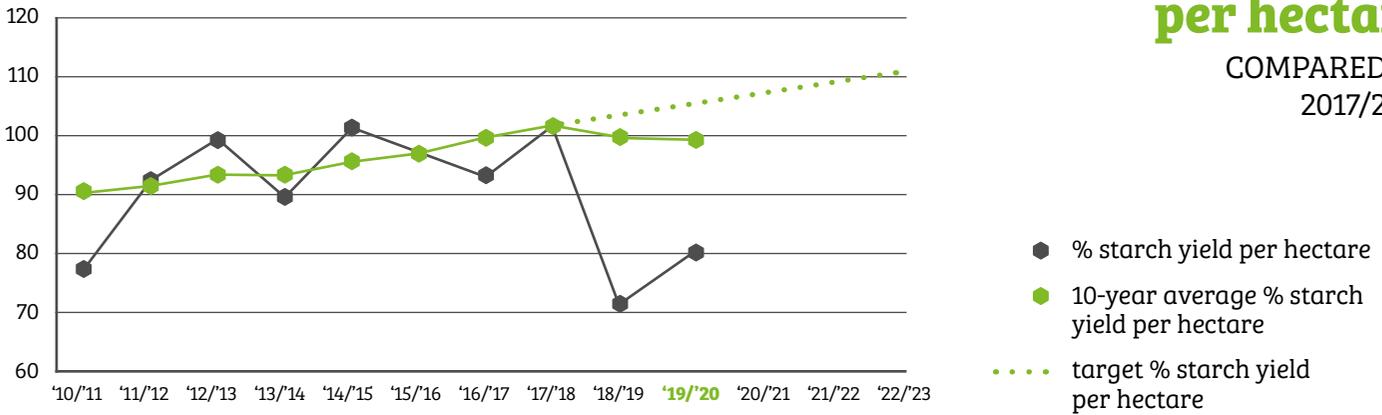
	Average number of	percentage female	percentage male
2013/14	1311	15%	85%
2014/15	1314	18%	82%
2015/16	1306	18%	82%
2016/17	1311	18%	82%
2017/18	1326	18%	82%
2018/19	1424	19%	81%
2019/20	1381	19%	81%



STARCH YIELD

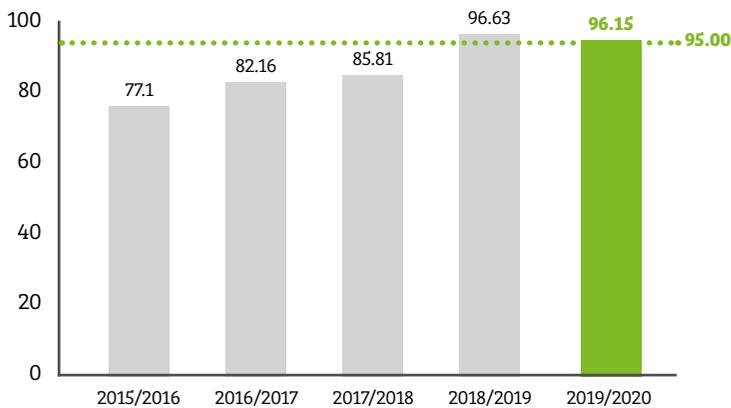
per hectare % COMPARED TO 2017/2018

2023 TARGET
10% HIGHER
STARCH YIELD
per hectare
 COMPARED TO
 2017/2018



performance price

PER TON of potatoes



Avebe bases the performance price on three components:

- **Potato money:** the money Avebe pays to all members for the potatoes they deliver, including all related performance components and discounts.
- **Cooperative result:** the financial result of the cooperative that is distributed to the members.
- **Other performance components** such as the storage fee and full delivery bonus and loading and transport costs.

Based on these three components, the performance price in 2019/2020 was 96.15 euros



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