



# A circular business model

Sustainability report 2020/21



**KMC**

Ingredients to grow your business

“Our vision is to integrate sustainability into everything we do. We are well on our way, but we can go even further. Our report is another way to commit ourselves to achieving the goals we set – and a tool to measure our performance.”

Jesper Burgaard, CEO at KMC

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Letter to our stakeholders by Jesper Burgaard

# KMC picks up the pace in the circular economy

KMC's business model is circular and based on the potato. With this principal in mind, we commit ourselves to use the potato in its entirety to create innovative and valuable products with a minimal environmental footprint.

The potato is at the heart of KMC for a good reason. It has one of the lowest carbon footprints of all Danish crops. It delivers many calories per hectare. It is healthy and nutritious. And we are continuously working to develop these strengths.

Our circular mindset means that we constantly refine our resources. We are inspired by the spirals of the Zealand Forest Tower, where each loop leads us toward new heights and offers new perspectives. It is thus natural for us to innovate on our side streams. For example, our potato protein, which can be used in a wide range of foods and even in plant-based meat.

But the precious potato is also in need of protection. Severe fungal infestations can wipe out a field in a matter of days, so it is imperative for farmers to stay proactive about crop protection to prevent losses.

## **What do we mean when we say sustainable?**

To us, sustainability means "producing a product that contributes to solving the global challenges concerning hunger, climate change and biodiversity, and that the production is based on the least possible input and thus minimum strain on the earth's resources."

Therefore, it is only natural for KMC to continue our efforts to halve the use of plant protection products by 2030. The solution therefore lies in strengthening and refining the genetic resistance of the potato, while continuously advising our farmers on optimal use of plant protection.

## **A sustainability report that commits us**

We will continue to strengthen our growth and show how sustainability and business can grow side by side.

Our surroundings expect us to communicate how we aim to decrease our environmental footprint. We take on this responsibility.

Our vision is to integrate sustainability into everything we do. We are well on our way, but we can go even further. Our report is another way to commit ourselves to achieving the goals we set – and a tool to measure our performance.


Happy reading!



**Jesper Burgaard**  
CEO







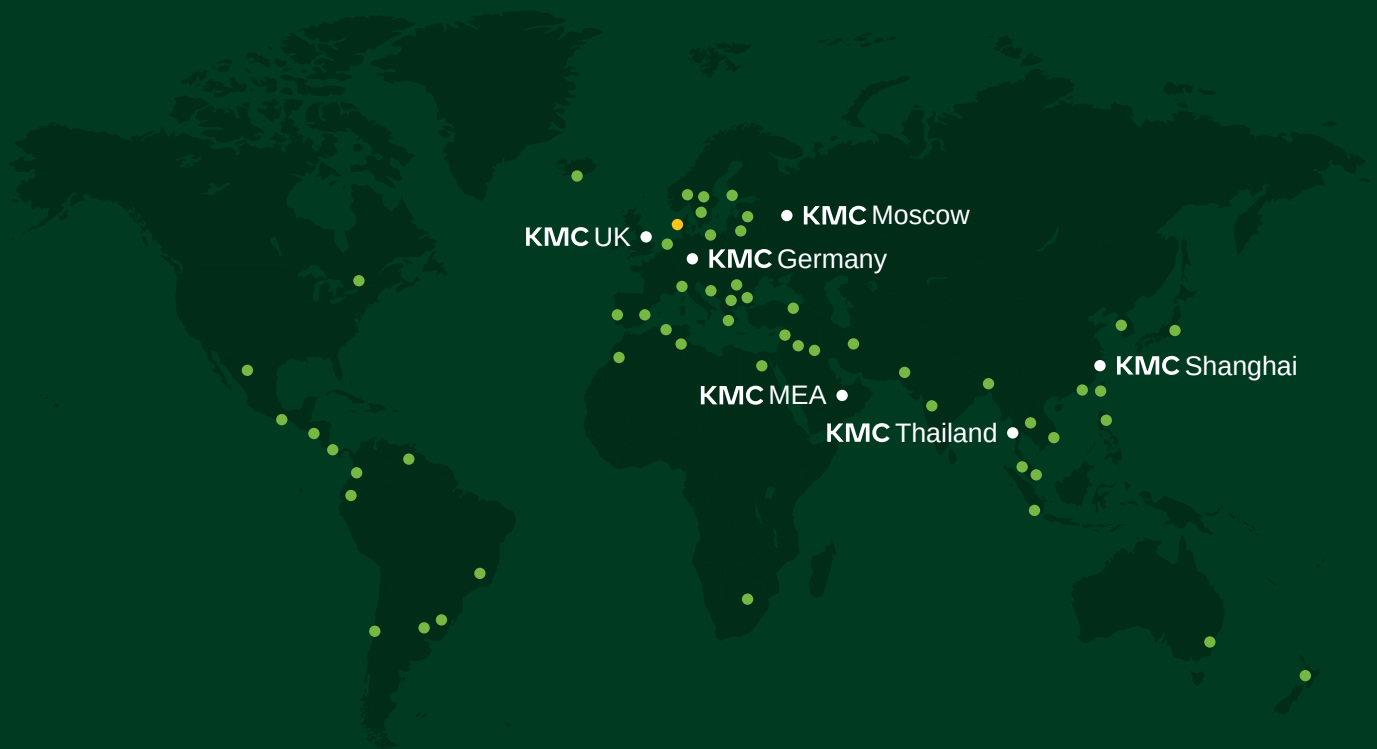
“Our circular mindset means that we constantly refine our resources. We are inspired by the spirals of the Zealand Forest Tower, where each loop leads us toward new heights and offers new perspectives.”

Jesper Burgaard, CEO at KMC



# KMC in short

● Headquarters   ● Sales office   ● Agents/distributors



Established

1933

Headquarters

Brande

Employees

247

Danish potato growers' ownership share

100%

Countries to which the products are exported

86

Export share

94%

# For more than 80 years, the potato has paved the way for innovative ingredients – and will continue to do so in the future

Since 1933, when KMC was founded as Kartoffelmelcentralen, growers began cultivating potatoes in the lean soil of Jutland. While the potato is still at the heart of the business, it is now being used as an ingredient in an increasing number of highly innovative food ingredients.

KMC is a cooperative owned by Danish starch-potato farmers. For more than 80 years, we have been growing, developing, and producing potato-based ingredients – now counting a few hundred employees and serving more than 80 countries across the globe.

At KMC, we believe that the future is plant-based. We continuously strive towards a climate-friendly future and also encourage our customers to do the same. That is why we will continue to accelerate our circular business model even more in future.

## **Circular business model pioneers**

It is no secret that Denmark has some of the best soil in Europe for potato growing, and the potato's diversified potential has only become clearer over the years. We are continuously working to strengthen our sustainable growth, and we maintain our strong focus on supporting a circular agenda in everything we do. Because it quite simply makes the most sense.

KMC had a circular business model long before the concept was put into popular use. Due to the long growing season and low climate footprint of the potato, it is one of the Danish crops that emits the least CO<sub>2</sub>. It is a win-win situation: Both for the economy and for the environment.

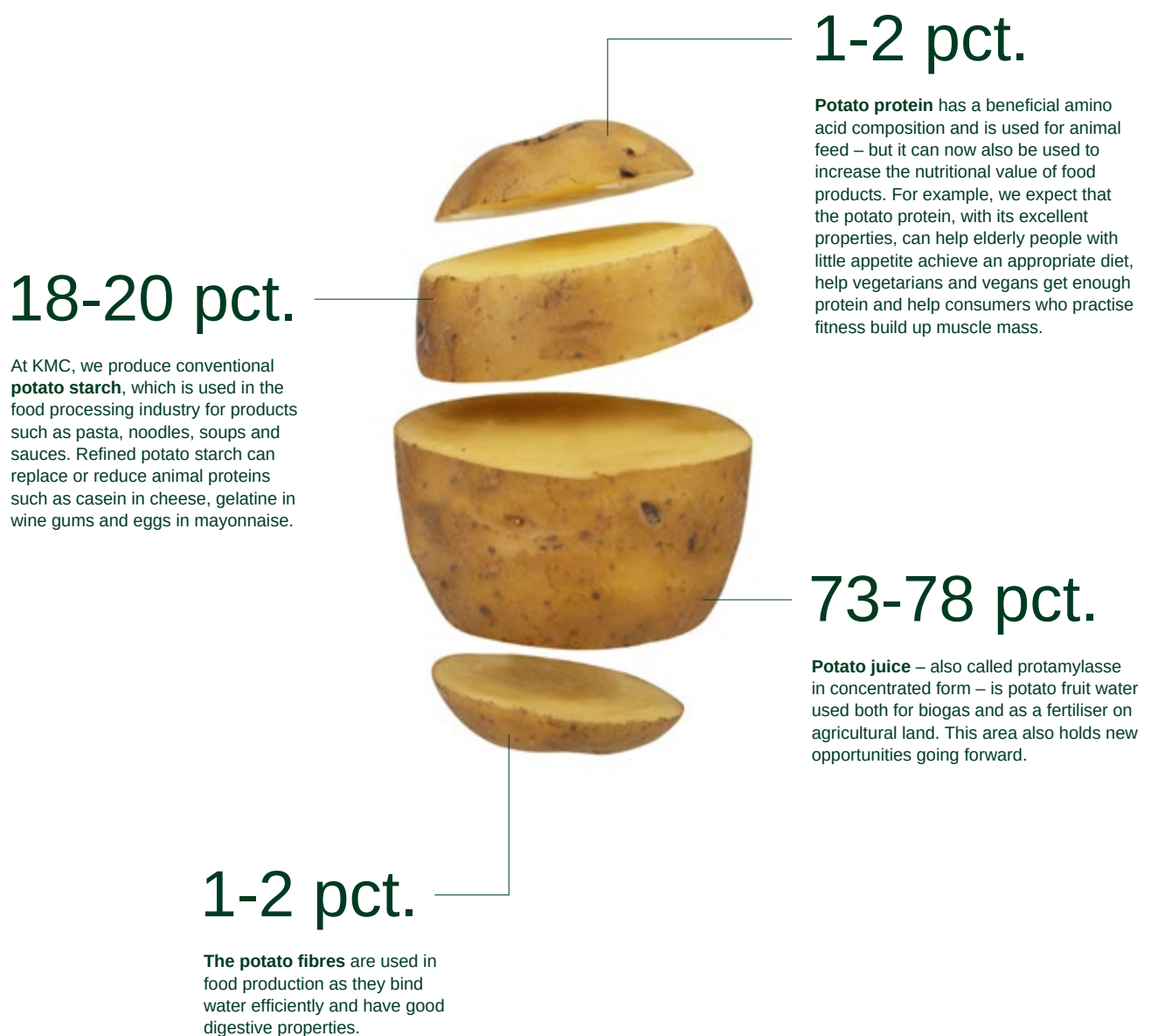






# How we use the potato

Although it has been more than 80 years since our foundation, our philosophy remains the same: Simple common sense is the basis for sustainable food production for the benefit of all. We are constantly looking for new ways of utilising everything in the potato – right from juice and starch to protein and fibre – in new and increasingly valuable ways.



# At KMC, everything begins and ends with the humble, yet powerful potato

At KMC, everything we do can be traced back to the following core values.



## Growing a plant-based future

In KMC, we believe the future is plant-based and climate-friendly. We contribute by helping innovative food manufactures replace animal ingredients with plant-based solutions – and integrate sustainability in everything we do to benefit our customers and the planet.



## Ingredients to grow your business

We are chosen for our high-quality standards, documented provenance, and strong environmental compliance guaranteed by our Danish roots. We foster lasting partnerships tailored to our customer's specific business, and we go the extra mile by cultivating every possibility needed to harvest the right solution.



## Implementing intelligent ingredients

In KMC, we pride ourselves on our know-how. Our extensive knowledge draws on long-standing university collaborations and our ground-breaking Food Innovation Centre. We rigorously apply our expertise in our customer's production set-up, optimizing every single production flow from ingredient to implementation.

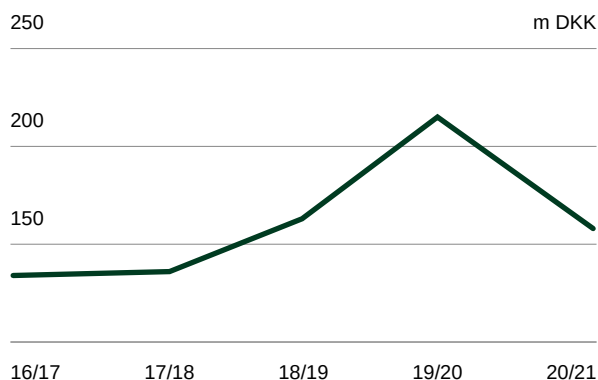






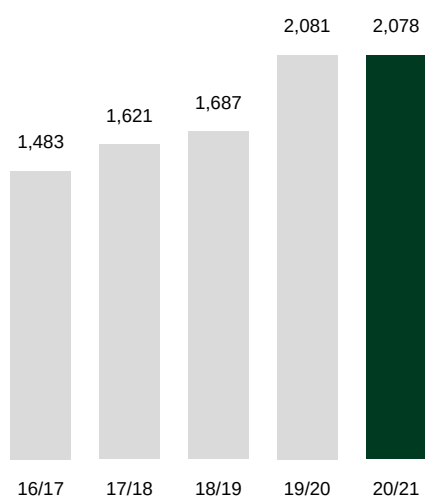


# Highlights of the financial year



## Net Income

Net income after tax amounts to just DKK 158 million, which is just over 26 percent lower than last year's result of DKK 215 million. This fall in profit is due to lower prices for potato starch on the global market and a sharp rise in logistics costs for overseas freight, which has an outsize impact, since we export over 93 percent of our goods – mainly to Asia and USA.



# 2,078

Net sales for the year reached DKK 2,078 million, the same level as in 19/20.

”Looking ahead to 2025, we are focused on fostering greater diversity within KMC. Because diversity is the key to development. ”Blind spots” occur when we all look alike. That’s why we want to make KMC a more diverse workplace, where people of all genders, ages and backgrounds contribute to the development of KMC. Diversity improves both company performance and employee well-being.”

Per Godsk Nielsen, CFO at KMC



## Growth in processing

In recent years, we have seen 18 percent growth in sales of processed potato starch for plant-based foods – an increase that exceeds our expectations. KMC therefore invested DKK 131 million during the 20/21 financial year to increase production capacity for processed products.



## Growth in employee numbers

Since 19/20, the number of employees at KMC has increased by 5 percent. In 20/21, employee growth was concentrated in production in order to support growing demand for processed starch.



Extract from Management Report

# Sustainable solutions fuel this year's growth

This year was marked by a record harvest of starch potatoes throughout Europe. Combined with periodically declining sales due to the corona pandemic, this created an imbalance between supply and demand on the global market. This drove down prices for potato starch, resulting in lower profits. Bottlenecks in international shipping caused the logistics expenses of overseas freight to explode over the course of the year, further eroding earnings. The fact that we were still able to meet expectations for the company's bottom line is due to the positive developments in processed products.

## Focus on processing

In recent years, the consumption of plant-based food products has increased significantly, and it is now something of a megatrend in the western world. A trend based on new kinds of meals and principles where climate responsibility is a key factor. This fits well with KMC's product range, which is continuously developed and optimized to match customers' – and the market's – changing needs, wishes and expectations.

The starch KMC produces is inherently plant-based and widely used in the food industry, and it can help replace or reduce animal ingredients in our customers' products.

## Reduced energy consumption

In the ongoing quest to make better use of the company's resources, our ambition is to reduce energy consumption per ton of starch processed by 10 percent by 2024/25 compared to the 2017/18 reference year. In 2020/21, we built and commissioned a new production plant at the factory, which, together with a different product mix, has meant that energy consumption per ton of starch processed is now 2.2 percent lower than in 2017/18. The year before, this figure was 7.4 percent lower. So, we still have some way to go to reach our goal.

## Cleaner water

Both water consumption and the quality of treated wastewater are considered to pose significant risks to the environment and climate. We therefore aim to treat 100 percent of the wastewater in our own treatment plant to a level that allows direct discharge to receiving waters by 2024/25. In 2020/21, we treated 94 percent of the wastewater at our own treatment

plant to a level that allowed direct discharge to receiving waters. The six percent that was not treated at our own treatment plant was treated at an external treatment plant.

## Fewer plant protection products

Every day, the Agro departments of KMC and our owner factories focus on ways to minimize the use of plant protection products by our farmers. That's why our agronomists are continuously testing alternative varieties, aids, cultivation methods and much more in our experimental fields in Arnborg.

We also advise growers twice a week during the growing season based on updated weather-related warning systems located centrally throughout potato growing areas. The goal of this advice is to reduce the use of plant protection products by 10-30 percent compared to routine spraying.

Last but not least, we are working with Aalborg and Copenhagen universities to develop ways to use CRISPR gene technology, which can halve the time it takes to develop new fungus-resistant varieties. We are also in open dialogue with political stakeholders so that we can be ready when the EU and Denmark approves the technology.






**Did you know that:**

In 2021, KMC planted wildflowers beside our production facilities in order to promote biodiversity?



A large, cylindrical concrete silo dominates the background. In the foreground, a yellow tractor with large black tires is pulling a red trailer. The trailer's bed is tilted, dumping a large pile of brown potatoes onto a metal grate. The scene is set in an industrial or agricultural facility with a paved ground.

“KMC’s business model is circular and based on the potato. With this principal in mind, we commit ourselves to use the potato in its entirety to create innovative and valuable products with a minimal environmental footprint.”

Jesper Burggaard, CEO at KMC







# Our five CSR goals

With the UN Sustainable Development Goals (SDGs) as a framework, we are working to achieve these five goals by 2024/25. We follow up on the progress annually.

Goal 1: Replace animal ingredients with plant-based ingredients



**SDG goal 12: Responsible consumption and production**

Ensure sustainable production and consumption patterns.

**Long-term goal**

We will replace 39,000 tonnes of animal proteins with plant-based alternatives in selected food systems in 2024/25.

**Goal status**

In 2020/21, we have replaced a total of 26,600 tonnes of animal protein in 60 different countries.

Goal 2: Increase the use of Danish-produced feed protein over imported alternatives



**SDG goal 15: Life on land**

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

**Long-term goal**

We will implement minimum 10,000 tonnes of potato protein in Danish feed in 2024/25.

**Goal status**

In 2020/21, we have implemented 9,200 tonnes of potato protein in Danish animal feed.



### Goal 3: Less use of plant protection products



#### SDG goal 15: Life on land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

#### Short-term goal

We want to minimise the use of plant protection products as much as possible by advising the growers. Depending on the weather, the goal is 10-30% each year.

#### Goal status

In 2020/21, we recommended reducing the use of plant protection products by 18.8%.

#### Long-term goal

We will increase the development of new varieties with improved resistance to primarily leaf spot and mould. The goal is minimum 10,000 new hybrids a year by 2024/25.

#### Goal status

In 2020/21, we created 7,500 new hybrids with focus on higher disease resistance.

### Goal 4: Well-being, safety and diversity



#### SDG goal 8: Decent work and economic growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

#### Long-term goal

In 2024/25, we have the following goal:

- 16% women on KMC's Board of Directors
- 25% women on KMC's International Management Committee
- 40/60% gender distribution (f/m)
- Max. 15% staff turnover
- Max. 2% rate of sickness absence.

#### Goal status

In 2020/21, the status was:

- 0% women on KMC's Board of Directors
- 8% women on KMC's International Management Committee
- 40/60% gender distribution (f/m)
- 9.7% staff turnover
- 1.67% rate of sickness absence.

### Goal 5: Reduce resource consumption and increase wastewater treatment



#### SDG goal 12: Responsible consumption and production

Ensure sustainable production and consumption patterns.

#### Long-term goal 1

The goal is to reduce energy consumption per tonne of processed starch by 10% in 2024/25 relative to the reference year 2017/18.

#### Goal status

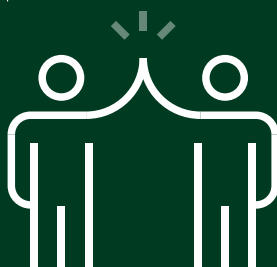
In 2020/21, we have reduced energy consumption per tonne of processed starch by 2.2% relative to 2017/18.

#### Long-term goal 2

The goal is to treat 100% of the wastewater at our own facility to a degree of purity that allows the wastewater to be discharged directly to the recipient in 2024/25.

#### Goal status

In 2020/21, we treated 94% of the wastewater at our own facility to a degree of purity that allows the wastewater to be discharged directly to the recipient.





KMC goal 1:  
Replace animal ingredients with plant-based ingredients



SDG goal 12:  
Responsible consumption  
and production

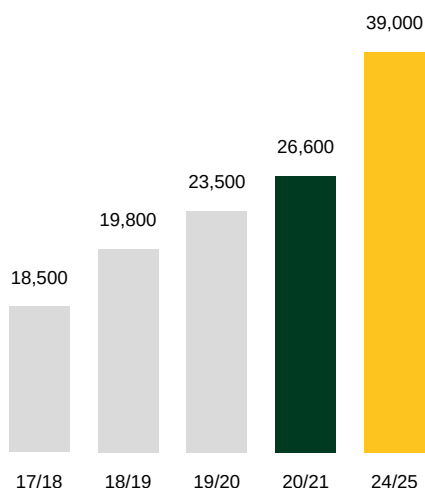
# Plant-based foods continue to grow

At KMC, we sell our know-how in the form of starch. Because potato starch is no longer just potato starch. It is starch with very specific properties that determine whether your plant-based cheese is firm or spreadable. Whether it melts on your tongue, in the pizza oven, or both.

Each year, we invest millions of kroner to develop new properties in our processed products. We are among the world leaders in replacing animal-based casein in cheese and gelatin in wine gums.

## Tonnes of potato-based ingredients replacing animal ingredients

(in tonnes)



### No difference in taste and texture

Our most important task is to ensure that consumers can't tell whether animal- or potato-based ingredients have been used – in everything from dressings and plant-based mince to gummy bears and cheese. That's why our Innovation Center continuously works to improve texture and bite, so we can meet the expectations of both customers and consumers for how plant-based products should feel and taste.

### KMC supports developing trends

And the trends are stronger than expected. In recent years, the consumption of plant-based foods has increased significantly, and the market for plant-based foods is expected to expand several-fold within a few years. This is because western consumers are increasingly turning to new kinds of meals and principles, and in most cases climate responsibility is a key factor. KMC will support this development even more in the future.

As a part of this development, we are currently conducting a life cycle analysis of our entire product range in order to be able to document the environmental footprint of all our products.

Our ambition is to replace 39,000 tons of animal protein in financial year 24/25. And with this year's development, we are already ahead of the growth curve.

# 26,600

KMC replaced 26,600 tonnes of animal ingredients in 20/21. An increase of 13 percent compared to the previous year.



# Veggie enthusiasts drive consumption of plant-based food

Almost half of Danes expect the plant-based share of their diet to increase in the future. Especially women, families with children, flexitarians and the younger generation are more willing to include more plants in their diet, while men and Danes over 50 express skepticism.

This is evident from a new market analysis by the Danish Agriculture & Food Council that aims to understand Danes' current and expected future consumption of plant-based foods.

The survey shows that as many as 69% of young adults aged 18-29 expect to eat more plant-based food in the future. According to Nina Preus, consumer sociologist at the Danish Agriculture & Food Council, it is not surprising that the younger generation in particular is embracing the green food revolution:

"Across surveys, we see that younger Danes are more frequently either vegetarians or have meat-free days. A number of them want to take their food consumption in a more climate-friendly direction, and many are both curious about and receptive to new and different foods."

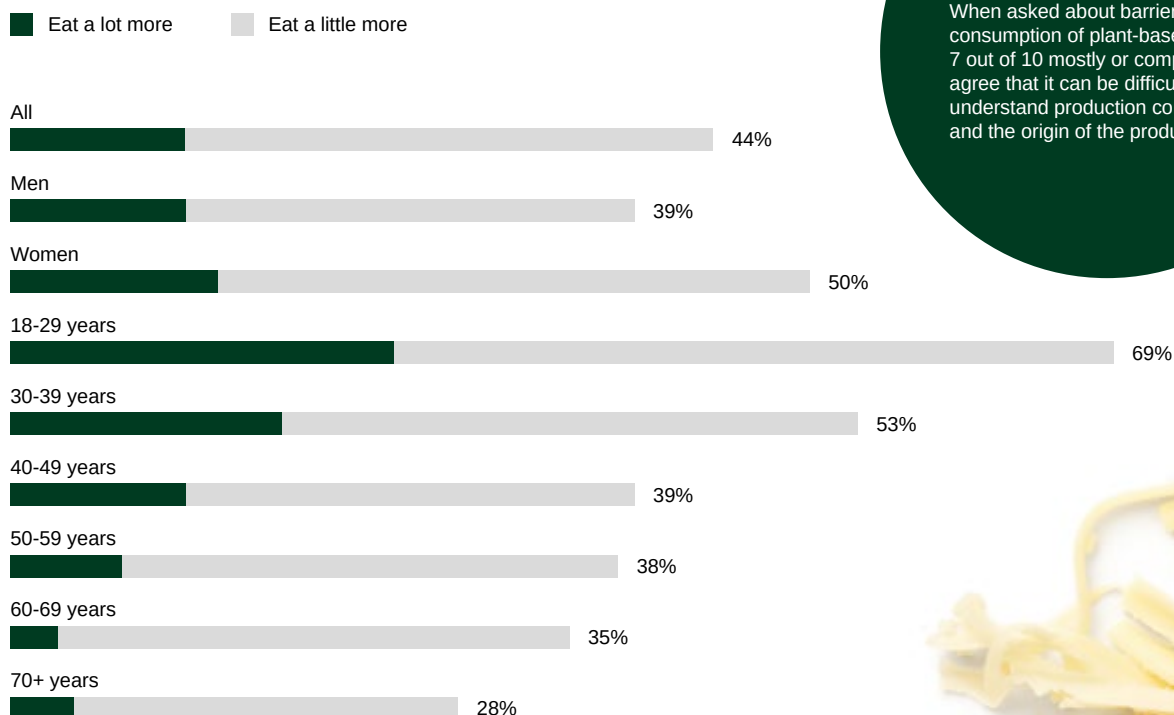
## Veggie enthusiasts with strong food values

Nina Preus highlights veggie enthusiasts in particular as a consumer group that has embraced plant-based food. However, this is also a group that needs to strike a balance between sustainable values and a limited food budget:

"In our segmentation of Danes, we have 13 percent who belong to the so-called veggie enthusiasts. They might typically be a woman or a young consumer who lives in a major city and has an income just below the national average," says Nina Preus and continues:

"This is a group that cannot necessarily afford foods like organic meat and free-range eggs, and therefore prefers vegetables, legumes and other plant-based foods that provide good nutrition, taste and, above all, a good conscience. If they cannot afford to pay for animal organics, fair trade and animal welfare, they would rather go without than compromise on their values."

## Question: Do you think that in the future you will eat more or less food and drinks made from plants?



## Did you know that:

When asked about barriers to consumption of plant-based food, 7 out of 10 mostly or completely agree that it can be difficult to understand production conditions and the origin of the produce.

The market analysis is based on a survey of 1,000 Danes aged 18 and over, conducted in May 2021 for the Danish Agriculture & Food Council by Epinion. The survey is representative in terms of gender, age, geographical region and education.





KMC goal 2:  
Increase the use of Danish-produced feed protein  
over imported alternatives



SDG goal 15:  
Life on land

# More potato protein in feed for Danish pigs

## The potato as Danish feed protein

Potato protein has a better amino acid profile than most other plant-based protein sources. This means that animals can digest the protein optimally, which reduces the nitrogen emitted with the slurry used as fertilizer on Danish fields.

While potato protein has been used widely in compound feed for the past 30 years, quantities were limited because there simply weren't enough potatoes. Since EU quotas were removed in 2011, twice as many potatoes have been produced – and more efficiently – which means that potato protein is now fully competitive with other protein sources.



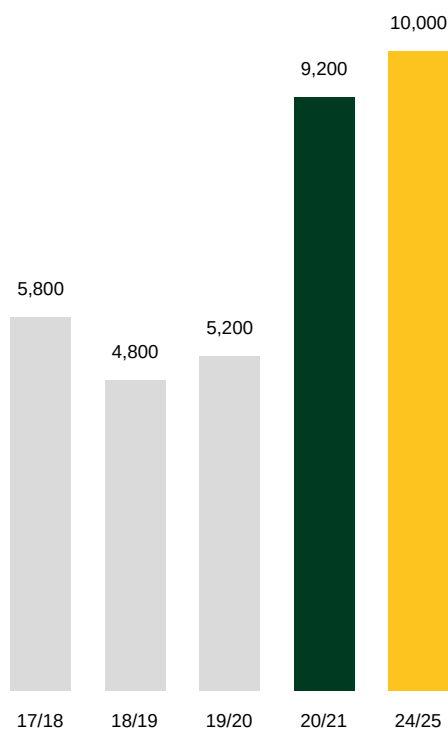
In order to reduce the use of imported feed protein, KMC has set a target to supply 10,000 tons of potato protein to Danish agriculture by 2024-25. This year, we have already taken big steps – thanks to an industry that also wants to go down a more sustainable path.

9,200 tons. That is how much potato protein KMC supplied to Danish agriculture in 2020-21, an increase of 78 percent over the previous year. This brings us close to our target of delivering 10,000 tons of potato protein by 2024-25, as the efforts of the past year and a half are paying off.

At KMC, we have put extra effort into debunking old myths about potato protein. New knowledge about the product's positive properties as feed for piglets and other animals has been very well received by the industry, which acknowledges the benefits of a sustainable alternative to imported feed protein – especially when potato protein is also competitive. Using Danish potatoes with a low climate footprint is currently a priority, and many Danish farmers grow their own potatoes in the field. When the potato protein returns to the farm in the feed for their animals, that just makes good sense.

## Development in sales of feed protein

Tonnes of potato protein sold to the Danish agricultural sector



”We are part of a trend of using more Danish raw materials in feed – an area that is currently getting a lot of attention. We are happy to contribute our new knowledge and research, so that we can dispel the old myths and work towards a more sustainable agriculture instead.”

Jesper Burgaard, CEO at KMC

### Greater knowledge of potato protein

KMC's product, called PotaPro 1500, has been added to Sege's feedstuffs table, which is supported by the Danish Agriculture & Food Council and consulted by farmers. This gives the product a stamp of approval and helps spread awareness. Additionally, KMC has researched and carried out feeding trials with varying doses of potato protein, where higher doses of potato protein have been shown to have a positive effect. KMC has also conducted trials with potato starch, another ingredient that can be used in compound feed. This not only binds the feed together better, it adds even more Danish produce to the compound feed, further lowering the climate footprint.

### Danish and sustainable

KMC has a goal to deliver more potato protein in Danish feed mixtures because protein is typically a major component of feed that is often imported from far away. Here, potato protein can play an important role, as the potato is grown in Denmark with a modest climate footprint and extracted from a side stream of existing potato starch production. That enables the extraction of Danish-produced protein without adding to the area of land used for agriculture or increasing the environmental impact.

This is not just about delivering the 10,000 tons of potato protein a year, but about ensuring sustainable developments in agriculture. That is why KMC is continuing its efforts with several exciting projects, including how we can expand the use of potato protein to other animal groups.

”For a year and a half, we have had a strong focus on increasing the use of potato protein in Danish agriculture. This has already been received very well by the industry, and it allows farmers to use the resources we already have, rather than using feed protein from abroad.”

Rune Friis Kristensen, Commercial Manager at KMC



KMC goal 3:  
Less use of plant protection products



SDG goal 15:  
Life on land

# Reduced spraying requires good connections

The potato covers two per cent of the Danish agricultural area. It is both climate-friendly and versatile, but vulnerable to diseases. This is mainly because potatoes – and vegetables in general – are more sensitive to diseases than other types of crops.

Fungal diseases such as mould and leaf spot are very weather dependent – dry, hot summers are bad news for the diseases, while humid weather with temperatures between 18-22 °C gives them good conditions to spread. During a season, there is a need to spray regularly – especially against fungal diseases, which can potentially destroy a field completely in only five days.

We all have an interest in reducing consumption to a minimum. And how can we do that? It requires good connections to predict the weather. But also to the Internet and EU legislators.

## **Proactive potato farmers wish to make a difference**

In the fall of 2021, 30 KMC potato farmers took part in a project named “The farmers take the future into their own hands” arranged by the think tank, Frej. The aim of the project was to find mutual understanding between farmers, companies and politicians regarding the reduction of pesticides and maintaining effective output.

KMC hosted the three workshops, which resulted in a series of tangible solutions which were presented to Danish politicians.

These solutions were for example:

- Genetic improvements by using CRISPR-Cas technology
- Increasing the use of biostimulants and biological plant protection
- Better use of precision agriculture

## **Did you know that:**

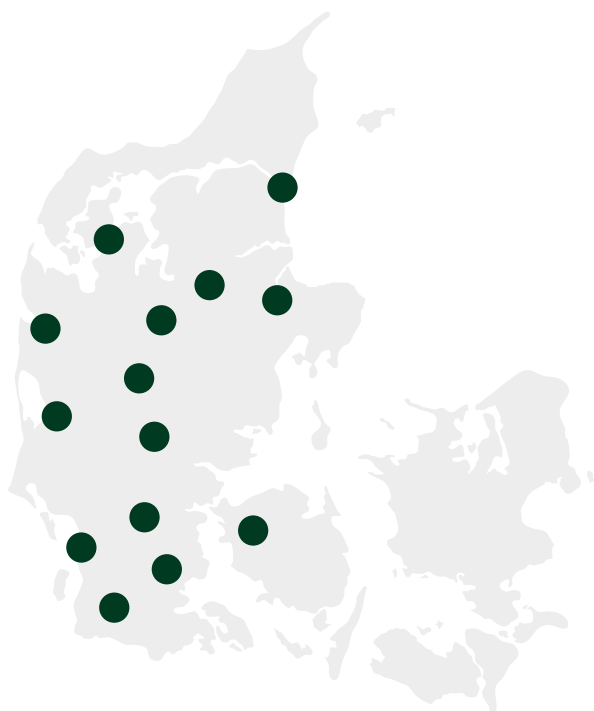
KMC tests new genetic varieties of potatoes in order to test increased disease resistance, new technologies etc. In 2021 we tested more than 400 different potato varieties.

## Effort 1: Mould warning

During the growing season 1 June to 15 September, KMC Agro advises potato growers twice a week based on local weather information. That way, the growers constantly have updated knowledge about the exact amount to spray to avoid mould. The website has 20,000 visits during the season.

In the hot, dry summer of 2018, KMC Agro recommended reducing the consumption of plant protection products by just under a third, while, in more normal, humid summers, the recommendations can reduce consumption by 10-15%.

**Each of the green circles marks an adjusted spray recommendation based on local weather data:**



Calendar year	Recommended reduction
2021	18.8%
2020	15.3%
2019	10.3%
2018	32.6%

## Effort 2: New varieties

We can also reduce the need for spraying by developing new varieties that are more resistant to diseases. It is a method that has existed for as long as we have grown potatoes. The challenge is that it takes up to 12 years to achieve the goal – without any guarantee that the more fungal-resistant potato variety also delivers on other necessary parameters such as starch content. KMC is working determinedly to get a new resistant potato variety available. The time frame is 5-7 years.

Financial year	Number of hybrids
2019/20	3,200
2020/21	3,500
2021/22	7,500
Goal 2024/25	10,000

# 10,000+

The goal is to arrive at minimum 10,000 new hybrids a year in 2024/25.

### New possibilities with CRISPR technology


One way of preserving the positive qualities of a specific variety – and merely add resistance – is to use the CRISPR technology. Here, for example, a bacterium can be used to create mutations in the DNA of the plant that are more disease resistant. Just like a vaccine that improves our immune system.

This way, only the specific property is added to the known variety. If the manoeuvre is successful, it can cut the consumption of plant protection products by up to 50% – and reduce the time needed to develop a new variety by 3-6 years.

Today, the technology can only be used in European laboratories – and not in fields – because of the EU's GMO regulation. CRISPR is, however, in full operation in, for example, the United States and Canada. At KMC, we work together with Aalborg University and the University of Copenhagen. This will enable us to start immediately when the EU hopefully approves the technology.








At KMC, we believe the future is **plant-based and climate-friendly**.  
Our contribution lies in helping innovative food manufactures make their  
products greener. And by becoming increasingly sustainable ourselves.

KMC is your preferred partner because we use our **extensive know-how**  
to provide solutions that develop your business and optimize every single  
production – from ingredient to implementation.

Because our **Danish roots** guarantee high quality and food safety.  
And because our team of experts stays on until your solution works.



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