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SVERIGES STÄRKELSEPRODUCENTER, FÖRENING U.P.A

Sustainability Report

2019/2020



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Our CEO's comments

Sveriges Stärkelseproducenter (SSF), an association of Swedish starch producers, operates on a market where attitudes to sustainability are evolving all the time and this means that there is growing interest in what we do. Using biological raw materials in a responsible way and making the best possible use of them as foods or materials is what we call "circular bioeconomy".

In our starch operation we focus on our climate impact, because the assessments we have conducted show that our most important environmental considerations are linked to carbon dioxide emissions and fossil fuel consumption. Over the past year we have devoted many resources to creating a greater understanding of the climate impact of our entire operation, from growing starch potato through to the refined product being transported to the customer. We now feel that we are beginning to get a good understanding of where we will take action to reduce our carbon footprint. It makes sense to start with what we have control over ourselves, i.e. our own consumption of fossil energy. We have now chosen to invest just under SEK 20 million in substituting LPG and heating-oil consumption with bio-oil. Part of the investment has been funded with the help of the

Swedish EPA's *Klimatklivet* initiative. This year alone we have managed to reduce our consumption of fossil energy by 30%. The aim is to be completely fossil-free by 2025. Once we have set our own house in order, the next step is to review what is termed "scope 3", i.e. the impact from farming starch potato, transport and the use of raw materials.

When it comes to farming and the use of raw materials (chemicals), we see opportunities for reducing their use by developing the potatoes we grow through modern plant breeding. The restrictions introduced by the EU on modern plant breeding techniques are, therefore, a major problem that hinders our sustainability work.

In our spice operation we purchase a large number of ingredients and raw materials from all around the world, and the focus of our sustainability work is in this supply chain. We audit our suppliers and go to great lengths to ensure that we use ingredients that are grown, harvested and handled in a responsible, sustainable way.

We are members of a European network called the Sustainable Spices Initiative which runs projects and supports the development of sustainably sourced spices. Our membership requires us to continuously increase the proportion of our purchases that are defined by the network as sustainably sourced spices.

We have been striving to reduce energy consumption in the production of dry and liquid spices and flavourings for many years. Our production plant in Fjälkinge is completely fossil-free.

Our new strategy plan for the period up until 2025 has now been decided. Sustainability is a key part of this plan. In the starch business, our strategy will be to continue to grow by introducing new farmers and developing existing ones. We are striving to refine as much of our raw materials as possible to help develop the foods of the future.

In the spice operation, we are continuously developing the products demanded by customers and consumers. In order to do this responsibly, we are gradually increasing our control over the origin of the raw materials, deploying more resources to work on plant-based solutions and reviewing our packaging materials.

We are part of the solution when it comes to sustainable climate and responsible products!

Hans Berggren

CEO of Sveriges Stärkelseproducenter, SFFr



Our sustainability year 2019/2020

Lyckeby

Assessing the climate impact of our operation

To gain a better understanding of how our operation affects the climate, in spring 2019 Lyckeby began a climate impact assessment from a life-cycle perspective for the company's operations, from farmed potato to native potato starch, and on to highly refined starch adapted for use in paper and food products. The assessments were carried out in the SimaPro tool with an external environmental consultant using data for 2017. Using these results, we are now developing strategies and goals for how we will reduce our climate impact in both the short and long term, as well as which are the most important activities for us to prioritise to be efficient. Furthermore, we can see that we are already working on measures and goals in the largest areas of our climate impact.

The data for the climate calculations has been studied internally in 2019/2020, and we are now developing a tool to calculate our impact for scopes 1, 2 and 3 in accordance with the Greenhouse Gas (GHG) Protocol and add specific emission factors relating to energy, chemicals and transport from our suppliers. We will also use this tool to evaluate various potential measures to reduce our impact.

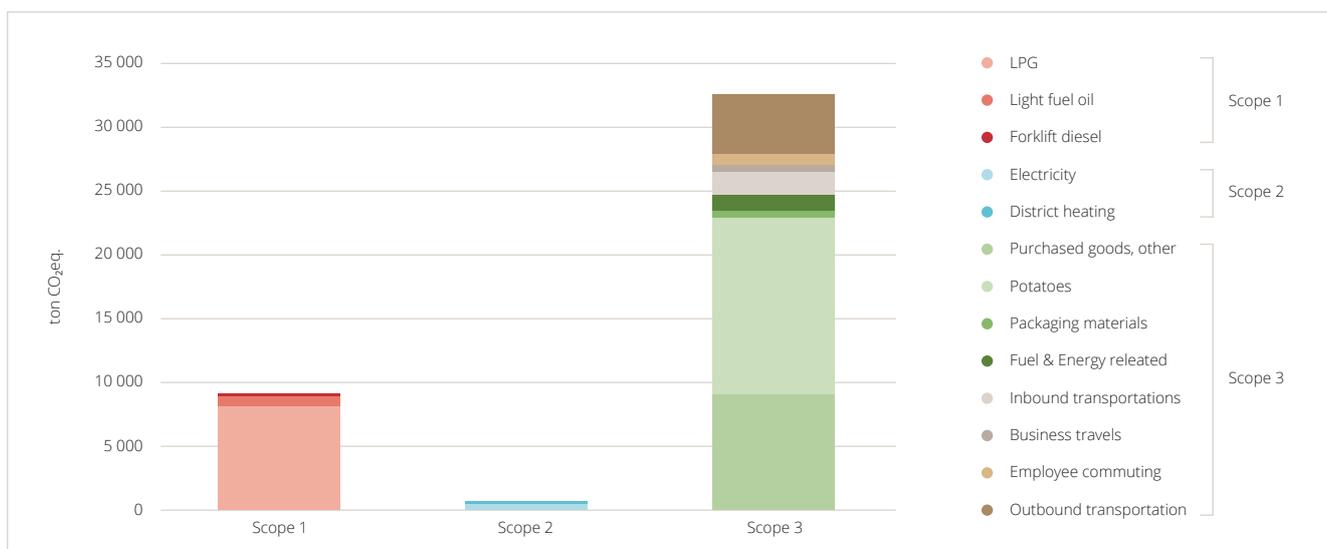
GHG calculations have been carried out for the 2017 and 2019 production years, and show that scopes 1 and 2 (chiefly emissions from energy consumption) account for approximately one-third of our climate impact. This is the aspect of our impact for which we are mainly responsible and therefore have the greatest ability to influence. The rest of the impact is primarily from farming potatoes, transport

to and from the operations, as well as the production of chemicals, etc. for production.

We are currently actively working on a goal to reduce scope 1 and 2 GHG emissions by 30% in the period 2017–2021. Planned measures, see page 21 Climate impact of starch production. During the year we will also develop new long-term strategic goals for reducing our climate impact; the aim is for our work to be in line with the Paris Agreement.

Results achieved 2019/2020

- Increase in CRISPR potato
- Reduced the actual amount of plant protection products used by our potato suppliers by 30% since 2014
- Made energy savings of 1 GWh a year, calculated as a rolling five-year average since 2014
- Applied for and were granted subsidies from the Swedish EPA through the Klimatklivet initiative to convert our steam boilers for bio-oil
- Applied for and were granted subsidies from the Swedish Energy Agency through the *Energisteg* initiative to streamline our energy consumption relating to heat recovery and evaporation technology



2019 GHG calculations for our starch operation



Culinar and Kockens

Membership of the Sustainable Spices Initiative (SSI) since January 2019

It is difficult for small food companies in Sweden to influence the farming of spices and herbs, which takes place on a global level. This is due to both geographical and cultural differences. This is why Culinar decided to join the Sustainable Spices Initiative (SSI), which strives to promote more sustainable production of spices, herbs and dried vegetables on a global level. By bringing together companies in the industry, SSI increases its ability to influence legislation, set demands on various players in the supply chain, learn from each other and collaborate in projects.

Membership of SSI gives us a greater understanding of the sustainability challenges in different parts of the supply chain and requires us to increase our understanding of our own problems. All member companies must commit to set goals that comply with SSI requirements and continuously report the results to SSI. Read more about our objectives on page 15 and about SSI on its website:

<https://www.idhsustainabletrade.com/initiative/sustainable-spices-initiative/>.

Results achieved 2019/2020

- Centralisation of the hot-water supply in the Fjälkinge factory
- 50% lower energy consumption over 10 years
- 99% of Kockens' packaging recyclable
- Supporting DLF Sweden's transport initiative
- Supporting the Swedish Food Federation's sustainability manifesto

Business model, Sveriges Stärkelseproducenter (SSF)

SSF's business model is to buy potatoes from our farmers/owners, to refine the potatoes' contents in the best possible way, and to then sell the products we extract to customers on selected markets. Some of the starch extracted from the potatoes is mixed with seasoning and/or other functional ingredients purchased from farmers and food producers all around the world, before being sold on. We sell the remaining content of the potatoes back to our farmers as a concentrated fertilizer for next year's crop.

We have two business areas, Starch and Spices, and the operations are run in the companies Lyckeby Culinar AB and Kockens AB. In the Starch business area, we work with the food and paper industries under the Lyckeby and Solam brands respectively. In the Spice business area, we work with the food industry and consumers/food service under the Culinar and Kockens brands.

Sveriges Stärkelseproducenter, SSF



SSF produces, develops and sells native potato starch, modified starches and potato fibre to the global food industry under the Lyckeby brand.



SSF sells refined starches to the paper industry in the Nordic region under the Solam brand.



Culinar AB develops, produces and sells products for flavour and consistency to the Nordic food industry under the Culinar brand. Culinar's production units also make products for Kockens AB.



Kockens AB sells spices and other colonial products to retail and food service in the Nordic region.



Our production units

SSF is owned by farmers in southern Sweden. All the potato we use as a raw material in our starch products is grown by our owners. We have a total of five production units in Sweden, located close to our farmers.

Nöbbelöv, Kristianstad

Our head office for the Starch business area and the parent company SSF is located outside Kristianstad. Here we receive potato from our farmers which is processed into native potato starch and fibre. The starch is then refined into modified food starch. The unit is also home to our R&D centre, which focuses on the development and use of starch in food and paper applications.

Number of employees: 97 permanent employees*

Fjälkinge, Kristianstad

Our head office for the Spice business area and the companies Lyckeby Culinar AB and Kockens AB is located in Fjälkinge outside Kristianstad. At the factory, raw materials are mixed with ingredients from Nöbbelöv to form dry and liquid food products. Fjälkinge is also where we have our development kitchen, which is adapted for flavour innovations in various food applications.

Number of employees: 171 permanent employees*

Bäckaskog, Kristianstad

In Bäckaskog we handle seed potato, which is sold to our farmers. Some of our products are also packaged here, such as Kockens' potato flour.

Number of employees: 11 permanent employees*

Mjällby, Sölvesborg

Mjällby is the production plant for technical starch products. Here we receive potato from our farmers and produce native potato starch. A small percentage is transported to Nöbbelöv, but the majority is refined on site into technical starch for the paper industry.

Number of employees: 18 permanent employees*

Jämjö, Karlskrona

The Jämjö plant is a production unit for native starch. The starch is transported directly to customers, or to Nöbbelöv and Mjällby for further refinement.

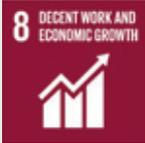
Number of employees: 5 permanent employees*

**In addition to the permanent employees, every year a number of temporary staff are employed in our starch operation, usually from September to January, to handle the production of native starch which is done during this period of the year.*

About our sustainability programme

At SSF we have chosen to divide our sustainability work into five focus areas. These areas are common to all our business areas, and they follow our value chain which is centred on refining farmed raw materials. To ensure that our focus areas are in line with national and global guidelines for sustainable development, we link our work in each focus area to one or more of the goals in the United Nations 2030 Agenda for Sustainable Development.



SSF'S FOCUS AREAS IN SUSTAINABILITY	2030 AGENDA SDGS
 Responsible employers and committed employees	  
 Responsible business partner	
 Sustainable farming	
 Production with optimised use of resources	  
 Development of sustainable product and packaging solutions	 



The 17 global Sustainable Development Goals (SDGs) of the UN's 2030 Agenda.

Within each of the five focus areas, we have carried out risk assessments and formulated goals and activities to prevent and reduce these risks. The risk assessments were conducted in advance in small groups of employees with relevant areas of expertise, and decisions were then made by the management groups in each business area.

There are many points of contact between our business areas, where we have a joint foundation in farmed raw materials and refinement, which partly takes place in the same factories. At the same time the business areas' operations differ, as farming takes place in different parts of the world

and sales in different markets. As a result there are both shared objectives for the whole of SSF as well as different objectives for our different production units, business areas and brands.

At SSF, we maintain an ongoing dialogue with our stakeholder groups. These dialogues build an understanding of the demands and expectations our stakeholders place on our business, which has provided valuable guidance in the process of prioritising and deciding on risks and objectives in our focus areas for sustainability.

STAKEHOLDER GROUP	COMMUNICATION CHANNEL
Board of directors	Board meetings
Owners	Local meetings, shareholder meeting, member magazine, farmer meetings, experience exchange groups, newsletter from the Chairman and CEO
Management groups	Management group meetings
Employees	Employee survey, performance reviews, intranet
Customers	Customer visits, customer audits
Suppliers	Supplier visits, supplier audits
Authorities	Environmental report, licence visits, licensing issues



Responsible employers and committed employees

Our approach and actions in relation to our employees are based on Swedish legislation, Swedish practices and central collective agreements. We are members of the Confederation of Swedish Enterprise and the employer organisation the Swedish Food Federation, which enables us to stay updated on what is happening on the Swedish labour market and

make sure our conduct complies with industry standards. In addition to this foundation, there are local agreements on terms and conditions, as well as local policies for rules, procedures and benefits. We want to be an attractive employer to both new and existing employees. Our corporate culture is characterised by commitment, pride and loyalty.

RISK AREA	PREVENTION	METRIC	OBJECTIVE/ACTIVITY
Workplace accidents	Reporting of near-misses Safety rounds Safety committee Whistleblower function	Number of accidents Number of near-misses	→ Vision Zero for workplace accidents
Work environment, health and well-being	Leadership presence Employee survey Performance reviews Occupational health service Work rotation in production Joint activities Ongoing information Whistleblower function	Sick leave	→ Keep sick leave at current level
Diversity and equality	Equality policy Salary mapping SMETA audit Employee survey Performance reviews Whistleblower function	Monthly pay	→ Prevent unjustified pay differences between men and women
Harassment	Employee survey Performance reviews Occupational health service Whistleblower function	Number of people who have experienced harassment	→ Zero tolerance for harassment
Sustainable development awareness	Sustainability training Information on the intranet	None at present	→ Introduce sustainability information in the programme for new employees → Make ongoing information

Workplace accidents

We strive to ensure that all our employees feel safe at their workplace, which is why our objective is zero accidents. Moreover, ongoing efforts to increase reporting of near-misses increase our ability to prevent workplace accidents. Systematic health and safety work, with formal procedures for

safety rounds, action plans and follow-up, is well implemented and a natural aspect of our work. Risk and consequence analyses are conducted for all changes, and close cooperation with the unions helps to ensure that risks are detected early.

	REPORTED NEAR-MISSES (NO.)		REPORTED ACCIDENTS (NO.)	
	2018/2019	2019/2020	2018/2019	2019/2020
SSF	33	52	7	6
Lyckeby Culinar AB + Kockens AB	34	36	12	12

Work environment, health and well-being

We are eager to pick up the signs of sickness and ill health at an early stage so that we can provide support and implement the right measures to minimise the problem. Every individual who experiences ill health should be treated with respect in line with our policies.

Sick leave in our business areas is low and has been at this level for many years. Since lower sick leave could lead to more instances of employees working while sick, it is not our objective to further reduce sick leave; instead our focus

is on working on measures to promote good health.

In March 2020 we noted a temporary increase in sick leave, which is thought to be related to the COVID-19 pandemic.

We encourage our employees to maintain a healthy physical and mental lifestyle. Our staff activities include health bingo, after-work meet-ups as well as social meetings with quiz trails and barbecues, etc. During the year we adapted our activities to COVID-19.

	TOTAL SICK LEAVE (%)		SICK LEAVE, NON-MANUAL (%)		SICK LEAVE, PRODUKTION (%)	
	2018/2019	2019/2020	2018/2019	2019/2020	2018/2019	2019/2020
SSF	2,5	2,6	2,5	2,3	2,4	2,6
Lyckeby Culinar AB + Kockens AB	3,3	5,2	2,4	4,6	4,3	5,8

The average period of employment at SSF is long, which means our staff turnover is low. We are proud to see that many of our employees choose to develop with us, move internally and stay with us. Measurements of how our employees perceive their work situation and well-being are conducted regularly through an employee survey, as well

as in discussions between managers and employees.

Our low staff turnover leads us to believe that we are achieving our goal of being an attractive employer to our employees. Our work in this area, however, never ceases, and we are striving continuously to ensure that working life remains sustainable for everyone who works for us.



Diversity and equality

Diversity and equality shall be a self-evident, natural aspect of our operation and mean that everyone has the same rights, opportunities and responsibilities in all of our areas irrespective of gender, age, ethnic or cultural background, disability or sexual orientation. All employees are entitled to be treated with respect. We regulate this in our policy.

As a result of this, everyone shall be treated equally regarding internal and external recruitment, personal development and pay. We set pay on an individual basis to a large extent, but all assessments in this respect shall be based solely on objective reasons such as expertise and performance.

As of 2017, we produce an annual report of all the work/measures we carry out on equal treatment, and pay mapping is a part of this. The aim is to discover, tackle and prevent unjustified pay differences between men and women. This is a collaboration between the company and the local union groups. Together we have concluded that we are within the framework of what is deemed reasonable.

Harassment

Our workplace shall be characterised by respect. Harassment and sexual harassment are not tolerated and we regulate

this in our policy. All forms of discrimination and harassment are banned in the workplace. "Harassment" refers to all types of victimisation, unwelcome behaviour and derogatory comments concerning, e.g. a person's gender, age, disability, sexual orientation, political views, ethnic or cultural background, skin colour, appearance or religion. It is always the subject of the treatment who determines what behaviour is unacceptable.

In our employee survey, we monitor whether any of our employees have experienced or witnessed harassment. The most recent employee survey at SSF was carried out in autumn 2019 and a new survey is planned for autumn 2021. At Lyckeby Culinar AB and Kockens AB, an employee survey was conducted in spring 2019.

The results from the most recent employee surveys show that there are cases of people who have been subjected to both harassment and sexual harassment in our workplace. We view this very seriously and have therefore taken measures to deal with the situation. For example, discussions have been held in our management groups and in departments to raise awareness of the problem.

In spring 2019, we introduced a whistleblower function so that an employee with any complaint can communicate with the management group in writing, by posting an anonymous report in the HR department's pigeonhole. The issue is then raised as soon as possible in the management forum, which decides whether any action needs to be taken.

In addition, at Lyckeby Culinar AB and Kockens AB, we will replace our employee survey with a more frequent pulse survey to measure our employees' well-being in the workplace. We hope that this will enable us to pick up any problems sooner. The new survey tool will be developed this year. At SSF, we will continue to use the current employee survey, because we see value in being able to compare scores from year to year to ensure that the measures we take are having an effect.

Sustainable development awareness

In order to ensure efficient, sustainable work practices throughout our value chain, we consider it essential that all employees at our company have basic knowledge of sustainable development. We acknowledge that we can always be better at raising awareness of this, and these efforts are taking place gradually. Moving forward, our objectives are to introduce sustainability information as part of our introduction programme for new employees, and to improve our employees' access to ongoing information about our sustainability work.



Responsible business partner

We conduct our business with suppliers and customers both nationally and globally. Our common core values exist in our corporate culture, a culture that has developed alongside our customers and business partners over many years in the industry, and in our high level of activity in our industry organisations.

RISK AREA	PREVENTION	METRIC	OBJECTIVE/ACTIVITY
Business ethics	Our corporate culture Business entertainment policy Introductory training Long-term customer relations Code of Conduct	None at present	→ Internal implementation of Code of Conduct → Vision Zero for corruption
Climate impact of transport to customers	Build knowledge Climate impact assessment of transport to customers	CO ₂ emissions – transport	→ Set goals in 2020/2021 (SSF) → Fossil-free transport 2025 (Kockens)
Climate impact of business travel	Build knowledge Climate impact assessment of business travel	CO ₂ emissions	→ Continued investment in technology in 2020/2021 to facilitate video conferences

Business ethics

Our corporate culture means that it is our responsibility to ensure that we follow prevailing legislation both as regards product safety, and financial rules and requirements. Our ambition when it comes to conducting sustainable, responsible business encompasses our conduct in everything related to business ethics, human rights, corruption and working conditions.

The risk of bribery and corruption is prevented through our business entertainment policy. Compliance with the policy is checked partly by the employee's immediate manager who is primarily responsible, and partly by the HR department which checks the mandatory verifications that are submitted.

Culinar AB and Kockens AB have a large number of global suppliers that are checked against our Code of Conduct, which includes requirements on human rights, employee

working conditions, discrimination, forced labour and child labour. We also carry out audits of our suppliers.

During the year we have adopted new codes of conduct and supplier codes for our Swedish companies.

All our employees who do business in our business areas undergo an introduction process to ensure they understand how we behave towards customers, the importance of building long-term business relations, and valuing and complying with our business ethics. We strive to continuously improve in our ethical approach. This lays a good foundation for continuing to conduct responsible sales work which leads to our customers feeling safe with us as a supplier, and also to our staff feeling confident in dealing with our customers.

We prioritise strong, long-term relations with our customers. By offering a high level of support in sales, logistics and product development, we create further peace of

mind with our customers and our own employees, thus laying the foundation for good business and mutual trust. We think of ourselves as a partner to our customers, and through cooperation we build understanding for the wishes and requirements of customers and the market as a whole.

We like to invite our customers to visit us and see our production process at first hand, enabling them to fully evaluate how the product they are buying is made. This applies not only to the physical process, but also to our expertise in food safety, legal compliance, health and safety, environmental consideration, product knowledge, sustainability and so on. By opening up and being transparent to our customers, we ensure that we live up to their demands and enable them to help influence and develop us towards being a more sustainable company.

Climate impact of transport to customers

In the climate impact assessment we performed for SSF in 2019, we identified transport to customers as an area that accounts for a significant proportion of our total climate impact for potato starch. As part of our overall review of our climate impact, we are now looking at how we can improve this. In addition to minimising transportation and choosing efficient modes of transport, we are considering whether or not we should stipulate that our hauliers use fossil-free fuel or whether we should be satisfied with society's requirements for a gradual increase in the proportion of biofuel in the fuel.

Everything we do at Kockens has its origins in nature, which is why it's natural for us to do everything we can for a healthy environment. A large part of our sustainability work involves how we can help reduce carbon dioxide emissions from our transport, as every day trucks leave our factory in Fjälkinge headed for customers across Sweden. Kockens has therefore signed up to DLF Sweden's 2025 Transport Initiative, a voluntary commitment and a clear statement that the FMCG industry wants to accelerate the transition towards fossil-free transport. As a result, Kockens aims to have fossil-free transport from 2025.



"It is natural for us at Kockens to sign up to the Transport Initiative. It's a key component of Kockens' sustainability work. Kockens wants to be the green option, both in the spice rack and regarding the environment"

Johan Tornakull
Vice President at Kockens

The first step was taken on 1 February 2020 when Kockens switched to HVO fuel. HVO, hydrotreated vegetable oil (tall oil), reduces our CO₂ emissions from domestic transport by 85%, which equates to 50 tonnes a year.

Climate impact of business travel

Our business travel adds great value in maintaining close, positive relations with our customers, carrying out audits, building confidence for our suppliers, continuing our training, and participating in collaborative projects with industry colleagues and other partners.

Our climate impact assessment shows that our business travel accounts, relatively, for a very small proportion of the total climate impact of our starch products. As a result, this area is not the highest priority in our programme to reduce our climate impact. Nevertheless, we see that striving to reduce the climate impact of our business travel has great symbolic value, both internally for our employees and externally for our customers and other stakeholders. We will therefore invest in new technology to improve the opportunities for effective video conferences, and also evaluate how this affects our travel.





Sustainable farming

The main raw materials for SSF in both our business areas are grown crops, so sustainable farming is pivotal to the entire group's business. Our business areas face different challenges in this area.

Our farming for starch production and refinement in SSF is carried out locally by our owners, which means that we have good potential to check that the farming is being managed sustainably and to influence the farmers.

Lyckeby Culinar AB and Kockens AB buy raw materials from all around the world, which means that checking food safety, farming conditions and employee working conditions is a major challenge. Our main sustainability focus at Lyckeby Culinar AB and Kockens AB is working to assure traceability among our almost 1,000 different raw materials and guarantee good social conditions for the farmer and their employees.

RISK AREA	PREVENTION	METRIC	OBJECTIVE/ACTIVITY
Use of plant protection products in potato farming	Farming advice Letters to growers Growing trials Experience exchange meetings	Grams of active substance per hectare	→ 50% reduction in amount of plant protection products used by 2020, while maintaining amount of starch produced
Climate impact of potato farming	Build knowledge Climate impact assessment	Carbon footprint per tonne of starch potato	→ Information to our farmers in 2020/2021
Farming and working conditions at global suppliers	Supplier Code of Conduct Supplier audits Membership of SSI	Proportion of sustainably sourced spices in accordance with SSI definition	→ New Supplier Code of Conduct sent out → By 2021, increase the proportion of sustainably sourced spices bought to: - 25% for turmeric - 15% for pepper - 13% for chilli

Use of plant protection products in potato farming

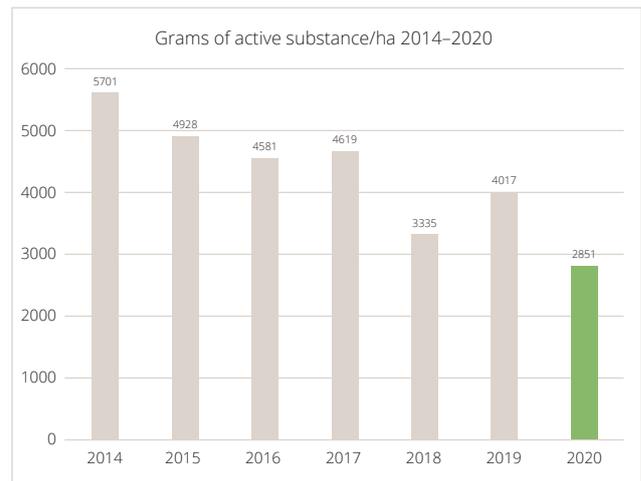
Plant protection products are used in starch potato farming to hinder weeds and prevent disease from attacking the plant, primarily blight and the fungal disease *Alternaria*. Research being conducted in the area, as well as our own growing trials, suggests that the amount of plant protection products can often be reduced with little or no impact on the growing outcome. Based on this, at SSF we have a goal that our potato suppliers should reduce the amount of plant protection products used per hectare by half by 2020, using the 2014 value as a benchmark.

To ensure that we achieve this goal, we give advice to our potato growers via weekly letters with recommendations on dosing of plant protection. The grounds for the recommendations come from existing forecasting models for blight and *Alternaria*. In addition, we are working intensively to develop new forecasting models, in part through growing trials where we assess the effects of plant protection products in different growing conditions. Our farmers meet at our experience exchange meetings where they share information and experiences with us and each other.

If we look at the development in the use of plant protection products, we can see that it has decreased by 30% since 2014. This result shows that our work with forecasting models

has led to greater awareness among our farmers, and that the actual amount of plant protection products used is lower.

The results also demonstrate that it is possible to reduce the amount of plant protection products, for example, during drought when the risk of blight is very low. It is not the reduced use of plant protection products that led to the poor harvest in 2018, but the extreme drought. Our farmers had no problems with blight on their crops, which is the disease that accounts for approximately 75% of all use of plant protection products, despite lower use of plant protection products.



Lyckeby Grow back to the farmer

Lyckeby Grow is a concentrated fertilizer produced from evaporating residual potato juice from the production of native potato starch. The product is offered to our farmers and other farmers in the local area.

The advantage of Lyckeby Grow is that the product has a high potassium content, which makes it an effective fertilizer for crops that require potassium, such as carrots, potatoes and ley. By mixing Lyckeby Grow with pig or cattle slurry in a calculated dose, the nutritional content of nitrogen and potassium can be adapted to whatever crop you want to use the product for.

Another advantage with Lyckeby Grow is that it smells considerably less than odorous conventional fertilizer. Lyckeby Grow has a slightly sweet syrupy odour, which makes it appropriate for use in areas close to residential areas.

Lyckeby Grow is approved for use as a fertilizer in organic farming and we can see great interest for the product among organic farmers of, for example, carrots and food potatoes.

The use of Lyckeby Grow leads to advantages for the farmer while at the same time it is very positive for us that we can add value to side streams from starch production.

TEXT: Gabriella Malm, Member Advisor, SSF



*Diffusion of Lyckeby Grow on farmland.
PHOTO: Elin Laxmar*

Climate impact of potato farming

The climate impact assessment we work with at SSF shows that the use of fuel during potato farming has more of an effect than we had realised. The climate impact assessment will be completed in 2020 and serve as a basis for which activities we will prioritise in future to start reducing the climate impact of the farming stage. .

Farming and working conditions at global suppliers

Culinar AB and Kockens AB import large amounts of herbs and spices from around the world every year. The spice trade is a complex area, with the highest proportion mainly being produced by small farmers. Many of these farmers live in poverty, which leads to poor working conditions for the farmer, their family and any employees they may have. In many cases the families cannot afford or are unable to allow their children to attend school; instead they stay at home and work on the farm.

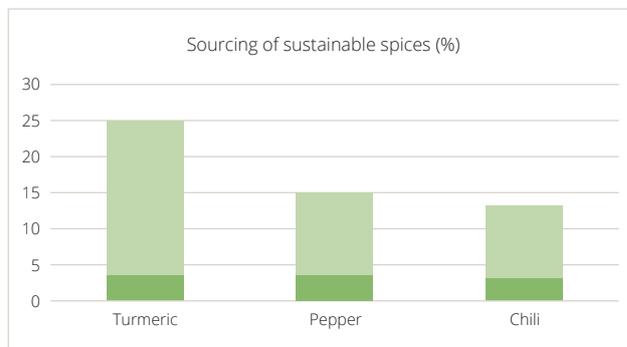
Since spices are used in most food products and are consumed globally, demand is expected to increase in order to satisfy the growing world population. A reliable supply of spices for a growing population is only possible if producing spices is economically viable and sustainable for the farmers, as they are increasingly moving away from agriculture for more secure sources of income. Consequently, sustainable growing among our suppliers is also linked to the long-term survival of our business.

Culinar AB and Kockens AB manage these sustainability risks through our Supplier Code of Conduct and our supplier audits, with checklists that clarify the demands we place on suppliers. During the year we carried out a major update of our Supplier Code of Conduct, where we clearly link our requirements to international conventions and guidance, such as the UN Guiding Principles on Business and Human Rights and the UN Convention on the Rights of the Child. In doing this we want to strengthen our contribution to the implementation of these conventions in the supply chain for spices, and thereby also contribute to the continued development of sustainable farming.

Culinar AB is continuing its cooperation with other actors through its membership of the Sustainable Spices Initiative (SSI). SSI is a global platform bringing together actors in the food industry that trade in herbs and spices, and that are willing to work together.

SSI supports the Sustainable Agriculture Initiative's definition of sustainable agriculture, which is: "The efficient production of safe, high quality agricultural products, in a way that protects the natural environment, improves the social and economic conditions of farmers, their employees and local communities." In order to assess the sustainability

of the raw materials, SSI uses a portfolio of different standards and certifications for both social and environmental sustainability, and if the supplier follows selected standards the raw material is defined as sustainable. In addition, SSI also works on specific projects linked to a particular spice or geographical area. These projects might focus on increasing farmers' knowledge of how to farm sustainably, for example.



SSI's long-term vision is 100% sustainable purchases of spices and herbs by its members, to be achieved through a gradual increase in the proportion of sustainable purchases. The first step is at least 10% absolute growth in the three largest spice categories from 2016 to 2021. For Lyckeby Culinar AB this means turmeric, pepper and chilli. The benchmark values from 2016 are between 3% and 4% for all three categories, and our objective is to increase these to 25% for turmeric, 15% for pepper and 13% for chilli by 2021.





Production with optimised use of resources

Our fundamental strategy for our potato operation in SSF is to optimise the degree of refinement and the profit of our growers/owners. Thanks to a high degree of refinement and by fostering side streams, we create sustainable production with high circularity.

The potatoes which the growers supply to the starch factory are separated into starch, fibre and protein. Starch and fibre are processed into quality-assured products which are then used as raw material for continued refinement into food ingredients or materials for the paper industry, or they are sold on as food ingredients with no further treatment. The protein is concentrated and quality assured to a high-quality feed protein. The remainder of the potato, where

we do not extract fibre, is a residual product called potato pulp, which is sold as animal feed to local farmers. Furthermore, we also get the mineral part of the potato, in the form of a juice, which is concentrated and stored over the winter before being returned to the farmland as a fertilizer. The residual water from production is returned to the farmland as irrigation. The waste we receive in the form of soil and stones is landfilled or used as filler.

Refinement of the starch potatoes is thus a good example of a circular system, where the vast majority is exploited in a resource-efficient way. At our factories, we also strive to ensure that fractionation, cleaning and refinement take place with the lowest possible input of energy and chemicals.



An outline of our circular flow in starch production.



Reception and weighing of incoming starch potato at production plant in Nöbbelöv.
PHOTO: Mårten Svensson

At Lyckeby Culinar AB, parts of the potato starch are mixed with spices and other functional ingredients to make finished spice blends and texturing ingredients, which are supplied to the food industry. Lyckeby Culinar AB's role in the value chain is to simplify and streamline the logistics and the mixing in the final process for our customers. Lyckeby Culinar AB also refines products sold to the consumer

and food service sectors by Kockens AB.

The refinement process in the spice operation is far less energy-consuming than the starch process. However, we also consider it important to reduce energy consumption here. All production units within SSF are certified to ISO 50001 and have the aim of reducing their energy use through continuous improvements and efficiencies.

RISK AREA	RISK	METRIC	OBJECTIVE/ACTIVITY
Climate impact of starch production	Climate impact assessment Energy management programme	Energy use, GWh/yr Scope 1 and 2 GHG emissions	→ Energy saving 1 GWh/yr calculated on rolling five-year average → Reduce scope 1 and 2 GHG emissions by 30%, 2017-2021
Chemical use in starch production	Climate impact assessment	Quantity, number of deals	→ Careful, three new deals equating to +600 tonnes
Energy use Fjälkinge factory	Energy management programme	Energy use per produced tonne of product	→ Total energy consumption Culinar Fjälkinge 380 kWh/tonne by 2020
Materials recycling, Fjälkinge factory	Increased waste separation	Quantity of waste recycled for materials	→ >50% of waste from Culinar shall be recyclable

Climate impact on starch production

The objective set out in our energy management programme is for SSF's production units to implement energy-saving measures of 1 GWh a year, as a rolling five-year average.

In 2019–2021, measures to optimise dryers and the hot-water circuit, along with the installation of plate heat exchangers, have helped us to save 1 GWh a year as a rolling five-year average since 2014. During the year we also applied for and were granted subsidies from the Swedish Energy Agency through the *Energisteget* initiative to streamline our energy consumption relating to heat recovery and evaporation technology.

GHG calculations have been carried out for the 2017 and 2019 production years, and show that scopes 1 and 2 (chiefly emissions from energy consumption) account for approximately one-third of our climate impact.

We are currently actively working on a goal to reduce scope 1 and 2 GHG emissions by 30% in the period 2017–2021.

As a result of this, the company has also applied for support via the Klimatklivet initiative. Support has been granted and all of the starch factories' burners in the steam boilers are currently being replaced. The investment totals SEK 16 million and means that in future the starch factories will be able to be powered by bio-oil. This will reduce consumption

of heating oil by 100% and consumption of LPG by approximately 95%. The work began in summer 2020 and will be completed in the first quarter of 2021.

During the year we will also develop new long-term strategic goals for reducing our climate impact, the aim is for our work to be in line with the Paris Agreement.

Chemical use in starch production

When we calculate the climate impact of our technical starches, we see that approximately 30% comes from the chemicals used in production. This is why it is very important to reduce this consumption. During the year, SSF has reduced this consumption by approximately 1.5%.

SSF has developed a new technique in the refinement of food starches which enables us to reduce chemical use in production, and the end product is considered to be free of E numbers. These types of products have now begun being sold, which means we can continue to reduce our climate footprint by increasing sales of the Careful product group.

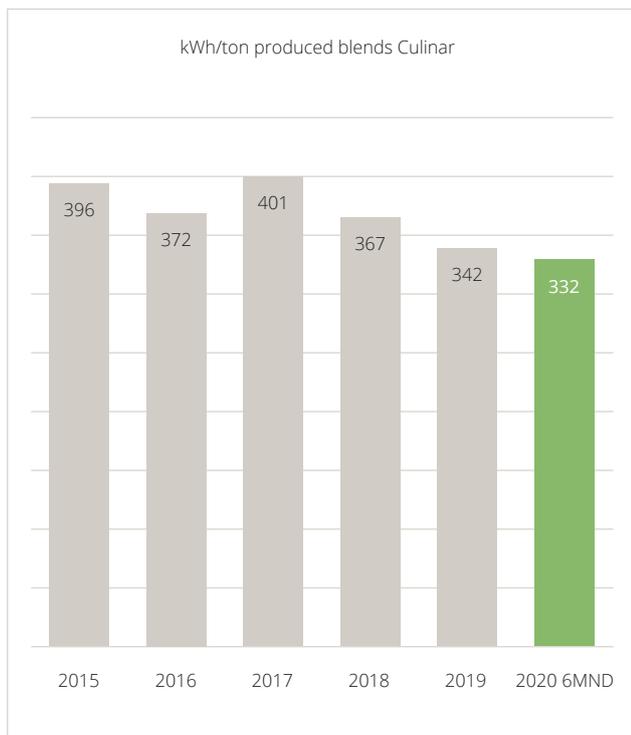
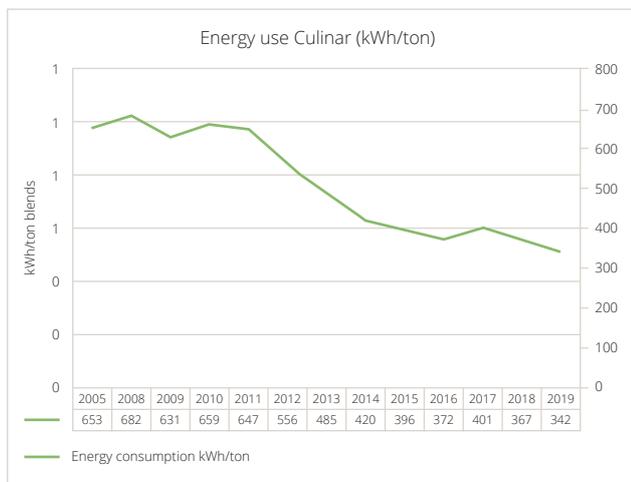
We are working at the development level to reduce the amount of chemicals used in making food products. Read more about this under the Sustainable product and packaging development focus area on page 24.



Energy use in the Fjälkinge factory

All of the energy we use for our own production in Culinar AB's factory in Fjälkinge has been fossil-free since January 2019. The objective is also for energy consumption per tonne of produced good to be 380 kWh per year by 2020, while maintaining the same volume of production as in 2017. We already achieved this objective in the 2018/2019 financial year.

We are currently developing new objectives for our energy efficiency programme which will be finalised by the end of 2020. In 2020 we have invested in new heat pump technology for our hot water, which means we are replacing our current direct-acting hot-water boiler. This reduced energy consumption already during the first six months of the year, see page 23.



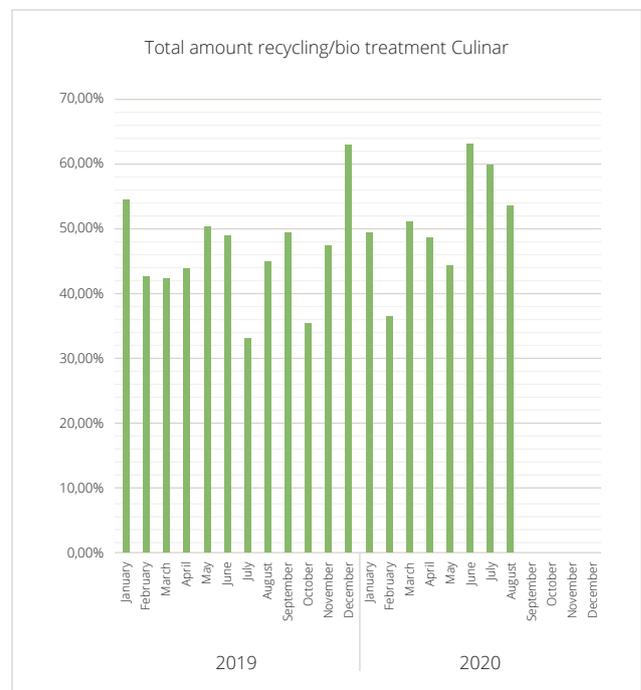
Materials recycling in the Fjälkinge factory

As part of our efforts to optimise resource utilisation in production, in 2020 Culinar AB initiated a project to increase materials recycling in production in Fjälkinge. In collaboration with our waste management supplier, we have identified new recycling fractions and introduced three of them in the operation. During the first six months of the year, we separated 11,500 kg of waste into these fractions; waste that would otherwise have been combusted.

We have also introduced a new KPI in 2020:

>50% of waste from Culinar shall be separated into the materials recycling, bio processing and recycling fractions.

The overall percentage for Culinar for the first six months of 2020 is 51%, compared with 45% for the corresponding period in 2019.



During the year Culinar has introduced three new materials recycling fractions

- LDPE coloured
- PP Bigbags
- Mixed paper

Centralisation of the hot-water supply

Rather than heating water in different hot-water boilers in different places in the production building, hot-water production is centralised in one place. The hot water is produced with the help of Culinar's large cooling/heat pump (geothermal energy system), together with a new smaller heat pump.

	MARCH	APRIL	MAY	JUNE	JULY	AUGUST
Energy saving Hot water distribution (kWh)	22 367	21 320	34 323	23 590	23 363	21 203
Total reduction of energy consumption during 6 month: 146 167 kWh						





Development of sustainable product and packaging solutions

At SSF we are continuously working on new technologies and processes, along with new uses for our main products and side streams, which makes us a world leader in the sustainable development of starch products.

At both SSF and Lyckeby Culinar AB, we like to work together with our customers as often as possible. Through support for our industrial customers, we are working together to develop the sustainable food products of the future.



RISK AREA	PREVENTION	METRIC	OBJECTIVE/ACTIVITY
Climate impact of potato starch	Long-term product development Modern plant breeding Participation in external projects	Carbon footprint of potato starch Metric E numbers and chemicals use	<ul style="list-style-type: none"> → Reduce scope 1 and 2 GHG emissions by 30%, 2017–2021 → Increase the percentage of E-number-free starches produced → Project to optimise the use of chemicals in the new factory
Impact on application	Competence development Support for customer	None at present	<ul style="list-style-type: none"> → Analysis of how our starch products affect the climate, environment and health in our key applications in 2020
Packaging solutions	Packaging development	Proportion of recyclable plastic of total volume of packaging material	<ul style="list-style-type: none"> → Only use recyclable plastic materials by the end of 2022 → Evaluation of new sack quality for starch products in 2020



Climate impact of potato starch

The development work at SSF has a general focus on developing products, processes and concepts that help to increase the sustainable development of our company. It is about creating new starch products that require less energy and fewer chemicals during production, new techniques that enable more resource-efficient manufacturing, and product solutions that help to create climate-smart, healthy and safe foods when our customers use our products as ingredients. The long-term vision of our development work is to create “the green starch factory” and we have a number of long-term research and development projects that are

leading towards this vision.

It is a big challenge to create starches that meet the food industry's requirements on process and storage stability, while also living up to the demands that increasingly conscious consumers place on the products. We want to make environmentally, quality and health-friendly products that meet the needs of our customers, and ultimately of consumers. At present, chemical modification is used to make our products stable, an energy and chemical-intensive process which produces starch products declared with E numbers in the final ingredients list.

To resolve the issues with stability, we have developed a product portfolio called Lyckeby Careful. The products in

this portfolio are refined using a new production technique – patented by SSF – that reduces the products' climate impact by cutting the amount of both energy and chemicals needed in the production process. The products in the Lyckeby Careful portfolio are known as "clean-label starches", which means they are declared without E numbers in the ingredients list of the foods in which they are used.

We have chosen to focus on eco-design and modern plant breeding as the next step in our path towards the green starch factory. We are working with the Swedish University of Agricultural Sciences (SLU) in Alnarp to develop new types of starch potato with modified starch properties. This has been possible using the CRISPR-Cas9 targeted mutation technique. Despite setbacks in the introductory phase, the project has resulted in new potatoes that contain starch that is naturally more stable, which means less chemicals and energy are needed to produce the starch customers demand. Thanks to the new potatoes, we can reduce the climate impact of our products considerably.

We are proud to say that thanks to modern plant breeding techniques, we have now made great strides in our endeavour to create eco-friendly, climate-smart food starches. Our new starch potato was grown in fields on a large scale in the 2018/2019 financial year for the first time in world history. This has continued in 2019/2020. If the project continues in a positive direction, we estimate that we will have large-scale production of new climate-smart starch products in 2023.

We are following developments in the EU's rules on modern plant breeding techniques with interest. In the ECJ verdict of 25 July 2018, the EU court decided to regulate modern breeding techniques, like CRISPR-Cas9, in accordance with the GMO Directive. This is despite the fact that the modern techniques can be used more safely and efficiently than conventional modification techniques, such as radiation and the use of chemical additives which are exempt from the legislation. The decision was criticised by authorities, scientists and the business community in the EU. Using our project on climate-smart food starches as an example, SSF is actively working to provide information about the need for and benefits of the modern techniques at regional and EU level. We expect the legislation to be revised shortly so that we can use modern plant breeding techniques on the same terms as non-EU countries.

This project is a shining example of what can be achieved when the industry works alongside academic research, in this case SLU in Alnarp, whose expertise and collaborative skills have been crucial in achieving our goals. We see great benefit in participating in collaborative projects with players from universities, trade and industry, and organisations. Another example of a project in which SSF plays an active role is SLU Grogrund – Centre for Breeding of Crops, which is within the Swedish government's food strategy and circular bioeconomy at SLU. The project is funded by the

government and aims to develop sustainable new crops that will lay a foundation for Swedish food development.

SSF is also taking part in "Give peas a chance", a project funded by the Swedish Board of Agriculture with the aim of developing new products and markets for the Swedish pea. SSF is contributing expertise and experience in extracting various ingredients from the pea.

As our climate impact assessments show that the chemicals used in production are one of the major contributors to our existing products' total climate impact, we are also working on shorter-term development projects to reduce our use of chemicals. A project is currently under way to optimise the use of chemicals in our recipes. The development department's involvement in the project will be complete in 2020, and the project will then go live in the new, modern part of our factory which is currently under construction.

Impact on application

Much of both SSF and Lyckeby Culinar AB's development work includes providing our customers with technical support. Our customers can receive help with their product development projects in identifying the right starches for the desired texture and mouthfeel, or the right combination of ingredients for a desired flavour. The experts at our development departments have extensive experience of working with different applications, and know which raw materials are suitable for different production processes in the food industry. We also offer support in developing sustainable new food products, such as climate-smart, clean-label, gluten-free, low-fat and vegan products, by helping our customers choose sustainable raw materials that work in these kinds of applications.

We are currently mapping and calculating how the use of starch impacts on the final application from a climate, environmental and health perspective, to offer our customers further support in developing sustainable foods. At SSF our aim is to analyse our most important application areas in 2020.



Sustainable clean-label starch

SFF has taken a big step towards our vision of creating a green starch factory.

The vision of creating a future green starch factory has been the basis of our development efforts in recent years, and part of our investment in sustainability as one of our key strategic focus areas. Driving our development in a direction that leads to more sustainable farming and production is not only an exciting challenge for our development organisation from a technical perspective, it also creates strong motivation from a climate and environmental perspective, and first and foremost from a commercial perspective because it strengthens our long-term competitiveness. Being able to work with a goal that fulfils all of these criteria is a huge privilege.

We have continued our investment in modern plant breeding and have over the past year continued with seed production of the world's first CRISPR potato – a potato that contains a storage-stable starch and is therefore a cornerstone in the challenge of using potato starch as a raw material in the production of clean-label starches, which require the finished food to have good storage stability.

There are still many challenges ahead in getting the licence we are aiming for, but several major hurdles have been overcome in the past year and we have taken great strides towards our goal.

TEXT: Mathias Samuelsson, Sales and Development Manager, SSF



*Mariette Andersson, scientist SLU and Mats Nordström, Culture Development, SSF harvesting the world's first CRISPR-potato ever grown in a field.
PHOTO: Mathias Samuelsson*

Packaging solutions

All of our packaging is designed to meet stringent requirements on protecting the products from contamination through moisture, dirt and damage during transport and handling so that our products last a long time. It is also key that the packaging is functional from a user perspective; it must be easy to open and measure out.

Our objective for packaging for the Kockens brand is to progressively move towards lower climate impact. Here we are working on targeted measures where it is evident that, without compromising on our requirement that the packaging must first and foremost protect the contents, we can reduce the amount of packaging material or move over to fossil-free material alternatives. We currently have no metric showing the total decrease in the climate impact from the measures we have taken.

The Kockens brand is also linked to DLF Sweden's Plastic Initiative 2022. In it, we and other companies in the grocery industry commit to strive towards a circular economy in line with the European Commission's launch of A European Strategy for Plastics in a Circular Economy in January 2018. The aim of the initiative is that plastic packaging which members put onto the market, and which comes under Extended Producer Responsibility regulations, should be able to be used for materials recycling by 2022. As members of the initiative, we commit to conducting an analysis of the

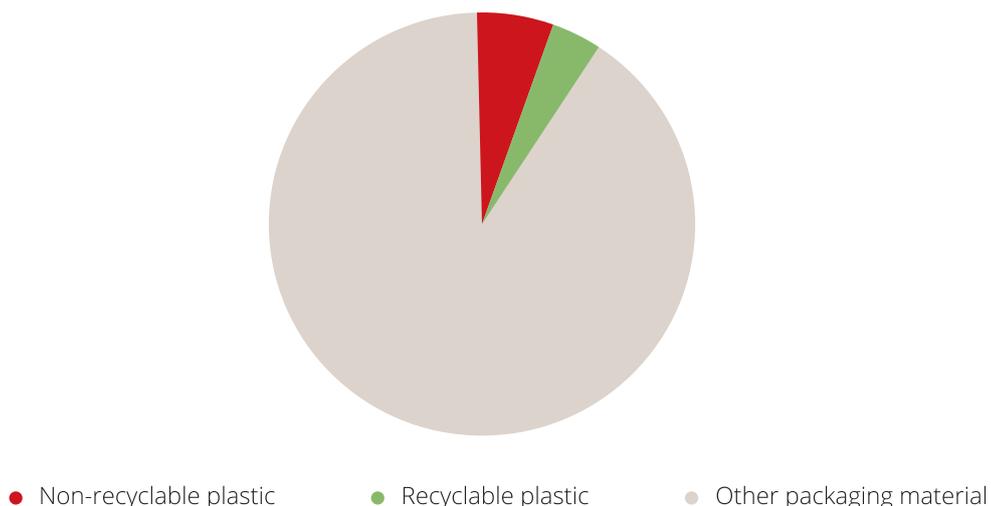
current situation to estimate what proportion of Kockens' plastic packaging can be recycled for material recovery, and to following up and reporting the results to DLF Sweden on an annual basis. The current figure is 93%. The 7% that cannot be recycled for material recovery is connected to three packaging solutions. Work to identify recyclable alternatives to these solutions is under way and has made good progress.

In 2019, we carried out a review of all Kockens brand packaging with an external specialist in recyclable packaging design. The review showed that our packaging can be recycled for materials to a high extent. In order to make even more of our packaging recyclable, it was recommended that we follow the development of recyclable laminate that consists of more than one material, and review our labels and glues.

We are also reviewing our packaging at SSF. In our climate impact assessment we see that packaging for our starch operation accounts for a very small proportion of our total climate impact, but we still consider sustainability factors in our continuous packaging development.

The starch products are packed in small paper sacks or large polypropylene sacks, and we have now finished a project to evaluate whether it is possible to reduce the amount of materials in these types of packaging. For small sacks we have shown that it is possible to switch from three- to two-layer paper in the sacks, which will reduce the amount of material by 20%. The new sacks are now increasingly being used in production.

Break-down of packaging material for the Kockens brand (%)



The pie chart shows the proportion of plastic of the total volume of packaging material for products bearing the Kockens brand. It also shows what percentage of the plastic is recyclable for materials.



New packaging from sustainable material

In May 2020, Kockens Foodservice replaced all plastic jars for food service with one-litre gable-top cartons. The gable-top packaging is made from paper raw materials from sustainable forestry (FSC labelled) with a screw top made of 100% renewable plastic from tall oil. We have reduced the amount of non-renewable plastic waste by 98% (12 tonnes of plastic). Our packaging has now been given a new design and is more climate and environmentally friendly.

The carton is a climate-smart choice in many ways. Today approximately 80% of all paper packaging is recycled. Forests are a renewable raw material and with active, sustainable forestry at least two trees are planted for every tree harvested.

Carton packages often have a design that makes them smart to transport. They can be packed tight, and are robust yet light. (Source: www.skogsindustrierna.se).

The public sector including school kitchens, our largest customer group, has long sought plastic-free packaging to help them reach their environmental goals of reducing plastic packaging.

It feels great to be able to deliver more sustainable packaging to our customers! Our recipe for a sustainable future!

TEXT: Kristina Glantz, Product Manager, Kockens Foodservice

#foodwin

Turn food waste into a food win

We throw away an awful lot of food and food waste in Sweden. In fact as much as 938,000 tonnes a year, from households alone. An unpalatable fact indeed. Naturally not all of this is food that we can or should eat, but up to 50% of everything we throw away ends up in the bin unnecessarily. But with a bit of ingenuity and the right seasoning, we can utilise far more of our ingredients. Sometimes in ways that we might not have originally thought of. At Kockens we call this a food win.

In March 2020, Kockens took to social media – Facebook and Instagram – to urge Swedes to create a food win and be more sustainable in the kitchen.

So what tricks are there to wasting less in the kitchen? Well, it's a case of thinking outside the box. Of changing your ideas about what can be eaten and used in cooking and baking. An old banana? Brilliant. The liquid from a tin of chickpeas? A magic baking ingredient. The peelings from root vegetables? Great for snacking! And best of all – they're super tasty with the right flavourings and seasoning! Here's a tip for a food win!



RECIPE

Chickpea meringues with cinnamon

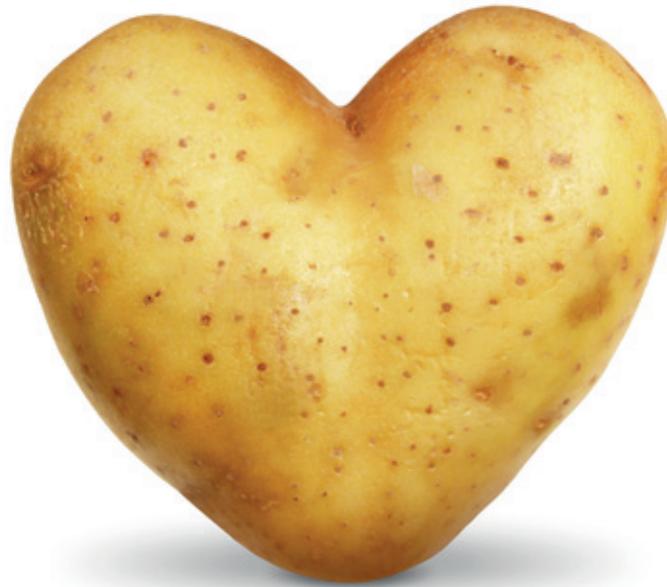
- The liquid from a 400 g pack of chickpeas (approx. 150 ml)
- 150 ml caster sugar
- ½ tsp vanilla powder
- 1 tsp lemon juice
- 1 tsp Kockens ground cinnamon, organic

Method

1. Pre-heat the oven to 125°C.
2. Whisk the liquid from the chickpeas using an electric whisk until fluffy.
3. Whisk in the lemon juice, sugar and vanilla powder. After whisking, the meringue should be stiff and glossy – you should be able to turn the bowl over without it pouring out.
4. Pipe the mixture onto a tray lined with baking parchment, dust with cinnamon and bake for 75–90 minutes.

//Emma Åkesson, Communications Manager, Kockens

About our Sustainability Report



SSF intends to publish a Sustainability Report annually based on our broken financial year, which runs from September to August. This is the third report we have presented this way. We do not currently report in accordance with GRI standards, but we intend to evaluate this option moving forward. The report encompasses all of our business areas

in the Swedish part of the business, and constitutes the formal Sustainability Report in accordance with the Swedish Annual Accounts Act.

This Sustainability Report has been examined and approved by KPMG in line with prevailing legislation.

Do you have any questions? Please feel free to contact us.



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