




From Growers to Consumers



How the European potato processing industry is driving **sustainability** throughout the sector

EUPPA Sustainability Report 2021

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European Potato Processors' Association

EUPPA is the European association representing the industry of potato processors in Europe. Its members are 6 national associations based in Belgium, Germany, France, Italy, the Netherlands and the United Kingdom as well as 16 individual companies, accounting for more than 90% of processed potato production in Europe.



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About EUPPA

The industry produces a wide range of products including frozen and chilled fries and other shaped potato specialties cut from whole potatoes; chopped and formed products such as hash browns; formed products such as potato croquettes; and dehydrated potato products including flakes, granules and sliced potato crisps.

EUPPA members' products represent a significant ingredient in numerous meals across Europe, serving multiple eating moments during the day - from breakfast, to lunch, snacks and dinner. Our members provide citizens with safe, delicious, convenient and affordable food, turning potatoes into value-added, high-quality products.



EUPPA's vision

"As the European potato processors' association, feeding millions of people every day, we want a Europe where our businesses and suppliers can innovate and flourish in a sustainable way. One where we engage pro-actively with our customers and consumers to inspire and help them to make healthy lifestyles their first choice; and where we collaborate with our communities and stakeholders to accelerate the shift towards more sustainable production and consumption patterns. Together we want to create the solutions for a sustainable future - promoting social, environmental and economic wellbeing across our supply chain".

Environmental challenges facing the sector

As the global population soars, demand for food continues to grow and agricultural-based industries are under increasing pressure to maximise yields. At the same time, the industry struggles to adapt to climate change, such as the exceptional drought conditions experienced in 2019, and needs to transform the fragile global food system by adopting sustainable growing practices and mitigating environmental impacts. Potatoes can be grown more sustainably than other staple foods - such as rice or wheat used to make pasta - thereby reducing stress on the planet. Potato processing is nevertheless an energy-intensive sector, and hence sustainability forms an integral part of discussions at both company and EUPPA levels.



The sector at-a-glance

Europe is the **second largest grower** of potatoes worldwide

Europe grows **122 million tonnes of potatoes**, with EU production at 52 million tonnes

More than 90% of potatoes used for processing in Europe **are grown in its North-West corner**

Companies contract the majority of their potatoes with individual growers in a **radius of on average 100 - 150 km from their factory**

European potato processors use **19 million tonnes of potatoes** as raw material annually

European potato processors **employ over 23.000 people**

Production is worth more than **10 billion Euros**.

Processed potato products from Farm to Fork

European potato processors



1. GROWERS

Europe grows **122 million** tonnes of potatoes



2. POTATO PROCESSING

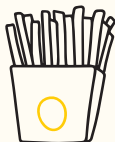
European potato processors use **19 million** tonnes of potatoes as raw material annually



3. PACKAGING

6. CUSTOMERS

Production is worth more than **10 billion** Euros



5. TRANSPORT

Companies contract the majority of their potatoes with individual growers in a radius of on average **100 – 150 km** from their factory

7. CONSUMERS



Introduction

Sustainability lies at the very core of the European potato processing industry. The sector works closely with partners at each stage of its value chain – from growers to consumers – to ensure that it preserves and protects for the future the soils, businesses and livelihoods that are an integral part of its ecosystem.

EUPPA and its members have built strong relationships with the farmers and growers from whom they source their raw ingredient - potatoes. As an industry rooted in the countryside, we naturally think long-term and work to promote soil quality and optimal yields year after year. We use the very latest research, science and technologies to help us achieve the best results.

Our production facilities are situated in North-Western Europe close to the potato growing communities of which we are a part. This serves to minimise transport distances and the emissions associated with them. We invest in advanced processing technologies that drive efficiencies and minimise waste within our industry while at the same time reducing energy consumption and conserving water and other resources. The industry is increasingly moving towards closed loop production where possible.

Today, many of our plants are powered by renewable energy and the industry has ambitious plans to increase the use of renewables across the business. The sector aims to reduce and reuse resources wherever possible – including in its packaging - and recent advances have served to cut our footprint considerably while also extending the use of recycled content.

The potato processing industry provides Europe's citizens with a nutritious, convenient and well-priced food source that is enjoyed by people across the continent. Its product portfolio is constantly evolving in line with consumer trends and expectations – including an expansion in the range of products with healthier and lower-calorie profiles.

As a food industry player, health and safety are part of our DNA. We take our corporate social responsibility very seriously and our members all meet and surpass EU and international regulations covering the sector. This also extends to conditions within our production, covering both our processes and responsibility towards the health and safety of our employees.

A growing number of EUPPA members are producing regular sustainability reports detailing their actions in these areas. This EUPPA first Sustainability Report 2021 introduces our industry and showcases the wide range of initiatives being taken by our member companies from land to plate. Their actions support the direction set by the EU Green Deal - notably the Farm to Fork strategy, the Biodiversity Strategy and the Fit for 55 package – to ensure the transition towards more sustainable food systems, preserving Europe's natural capital, and achieving climate neutrality. They demonstrate how Europe's potato processing sector is committed to upholding the sustainability of its raw ingredients, production processes and final products, to ensure the future viability of our planet.

A photograph of a person wearing a red and white plaid shirt, holding several potatoes in their hands. The person is standing in a field of green potato plants. The background is slightly blurred, showing more of the field and some distant structures. The overall tone is warm and natural, with a yellow decorative shape on the right side of the image.

HOW THE SECTOR IS MAKING
PROGRESS ACROSS KEY AREAS OF
ENVIRONMENTAL SUSTAINABILITY

GROWERS

— Biodiversity and soil health

Growing sustainable crops

■ Rooted in the agricultural sector

European potato processors are rooted in the agricultural sector, situated close to growers and all potato actors. More than 90% of potatoes used for processing are grown in North-Western Europe. For decades, strong foundations have been built with local farming communities based on sound agricultural practices, environmental footprint and traceability, to support future sustainable agricultural schemes.

Thanks to their proximity to growers, and in order to be able to secure the long-term supply of high-quality processing potatoes, the sector enables and supports growers to improve soil health and increase yields while also lowering the environmental impact per tonne of potato products produced. Healthy soils support stronger and more resilient crops, increasing not only the yield but also the quality that is harvested per acre. Therefore, the health of the planet's soil and biodiversity is vital to the future of food production.

Potatoes are both climate-friendly and versatile, but vulnerable to diseases. This is mainly because potatoes – and vegetables in general – are more sensitive to disease than other types of crop. Fungal diseases such as mould and leaf spot are very weather dependent – dry, hot summers are bad news for diseases, while humid weather, with temperatures between 18-22 °C, gives them good conditions to spread. During the growing season, crops need to be sprayed regularly – especially against fungal diseases, which have the potential to completely destroy a field in just five days.

Plant protection products (PPPs) play a major role when it comes to biodiversity and soil health and we all have an interest in reducing their use to a minimum. For example, our industry is working towards optimising the use of anti-sprouting agents after the substance chlorpropham (CIPC) was not renewed for use in the European Union. However, the use of PPPs cannot be eliminated completely, and the phasing out of these products and the need for alternative solutions takes time.

It goes without saying that EUPPA members are fully compliant with all legislations regarding the use of pesticides, and, in addition to initiatives taken at individual company level, we aim to further reduce their use globally by developing a **sector-specific EUPPA roadmap**.

CALL-TO-ACTION

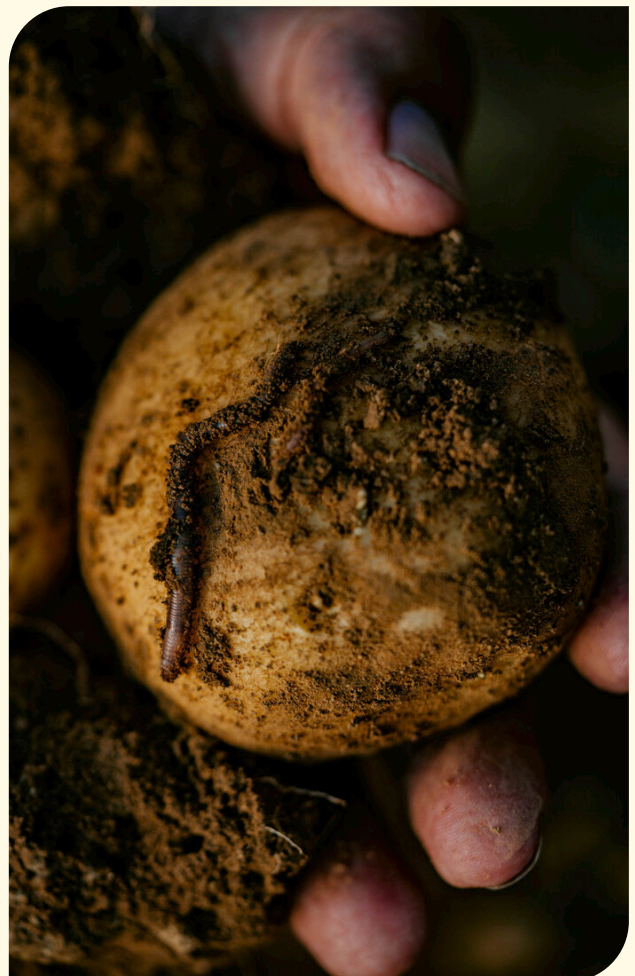
As the European Commission intends to reduce the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50% by 2030, EUPPA calls for in-depth impact assessments to measure the effects of such measures on the potato processing sector and for a coherent legislative framework. This will enable the sector to continue producing and processing potatoes in the most sustainable way possible while maintaining the competitiveness of the industry.

In addition, EUPPA calls for incentives to ensure a sustainable and fair income for farmers, through the promotion of a new green business model that would, for example, reward regenerative practices.

■ EUPPA members working hand-in-hand with growers and farmers across Europe

• **McCain Continental Europe: Building a pilot farm network in Continental Europe**

One of McCain's flagship regional programmes is in Continental Europe and in 2016, its European team formalised seven focus areas for sustainable agriculture. Working with a network of 10 pilot farms in France (3), Belgium (2), the Netherlands (3), and Poland (2), the company trialled sustainable management practices and also worked on a procurement strategy to acquire pesticides with lower levels of active ingredients. These combined activities helped McCain's growers to reduce pesticide use by 25% between 2006 and 2016. It was also able to reduce the use of nitrogen mineral fertilizer by 8% per hectare of potato crop grown for the company. The programme lays strong foundations to support McCain's 2030 commitment to implement regenerative agricultural practices across 100% of potato acres. The company will test and experiment until it is sure that what it asks and expects of its farmers is not only feasible on their farms but also economically viable.



- **Pomuni: Building long-term relationships with potato growers**

Working closely with its local potato growers in order to ensure constant high quality is a key aspect of Pomuni's strategy. It is nurtured by an open dialogue that enables all parties to learn, adapt and react when needed. Generating mutual trust through long-term relationships is essential for the quality of the potato harvested - and for Pomuni's final products. It all starts in the field with the growers. As a concrete example, Pomuni invests in fields that it can irrigate and constantly monitors both soil and its moisture. That way, the company ensures a good habitat and environment for potatoes and achieves a perfect yield that benefits both Pomuni and growers. At the end of each season, the company organises a 'Pomuni Expo', where samples of all the fields are displayed and farmers are able to discuss opportunities for the following year.

- **KMC: Mould warning system**

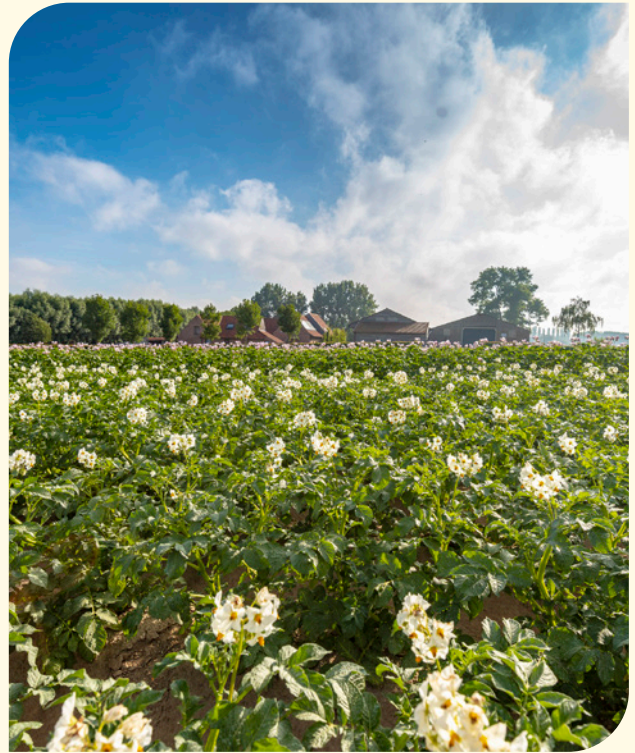
During the growing season - 1 June to 15 September - KMC Agro advises potato growers twice a week based on local weather information. That way, growers have constantly updated knowledge about the exact amount to spray to avoid mould. The company's website receives 20,000 visits during the growing season. In the hot, dry summer of 2018, the company recommended reducing the consumption of plant protection products by just under one-third, while, in more normal, humid summers, the recommendations can reduce consumption by 10-15%.



— KMC test fields

- **Mydibel: Investigating new varieties**

Mydibel saw a 5 to 15% drop in the yield of its potato crops over the past two years due to changing weather conditions. To cope with this trend, the company decided to spread its risk even further. While popular varieties such as Fontane and Challenger are still the mainstays, it is constantly exploring other varieties that are better resistant to periods of drought, diseases, etc. In addition, it is also investigating potato varieties that require less nitrogen. New legislation forces it to use less fertilizer in order to limit the nitrogen build-up in agricultural soils and secure groundwater quality. Mydibel has currently planted 200 hectares of the new varieties in its test fields and those of its suppliers in order to identify which could have a long-term use for the company and its partners.



- **Lamb Weston / Meijer: Sustainable Agriculture - focusing on soil health**

Lamb Weston / Meijer (LW/M) has developed a comprehensive sustainable agriculture plan with soil health at its core. It has been implemented in the Netherlands, Belgium, France and the UK and will be rolled out over the company's total growing area in NW Europe (including Germany and Austria) over the next few years. LW/M stimulates and facilitates peer learning among its growers and is closely connected to agricultural universities and experimental arable farms for testing science-based solutions. Over the past 3 years the company has worked hard to develop, communicate, and implement its sustainable agriculture plan across its European growing regions and to engage with the 600+ growers it works with. To reduce its product carbon footprint and water footprint in a meaningful way, LW/M needs to concentrate even more on helping its growers to advance sustainable agriculture. This is why it is continuing to expand the implementation of its Sustainable Agriculture Plan, initiated in 2017 (see infographic below), across its other growing regions in Europe to actively involve all of its growers.



— LW/M - infographic defining its 'Sustainable Agriculture' model

The plan involves a number of key elements including: Developing LW/M's own 'soil label' – a list of measures that growers can take to improve soil parameters are scored on their impact on soil health. They include: increasing the percentage of organic matter in the soil, frequency of crop rotation, percentage of cover crops, composition, pH level and biodiversity. The soil label is designed to ensure that good, long-term crop yields are secured in LW/Ms European sourcing regions while regenerating the natural capability of the soil.

Working with experimental (research) farms using innovative techniques and technologies on two farms in the Netherlands and organising grower visits to show them what is being done and discuss issues relevant to their own farms.

Raising standards to SAI FSA Gold level (Sustainable Agriculture Initiative, Farm Sustainability Assessment) with a goal that all growers achieve it by 2025. The majority of growers in the Netherlands have the Dutch certificate from 'Voedsel- en Voederveiligheid Akkerbouw', which will be classified as SAI FSA Gold in 2021.

- **Pizzoli: Adopting natural, low impact agronomic practices**

Pizzoli grows its potatoes by adopting agronomic practices that are as “natural” or “low impact” as possible, both in fertilization and in defence against insects and diseases, rationalising the use of fertilizers and pesticides. 100% of the company’s producers of table potatoes apply the Principles and technical guidelines: IP Integrated Production.

Each year Pizzoli performs farming experiments on:

- variety (pathogen-resistant/-tolerant),
- biocontrol (check efficacy of low impact defence products)
- chemical fertilizer reduction (increase the effectiveness of chemical fertilizers to reduce dosage).



Use of pesticide in compliance with regional Integrated Pest Management plans



Crop rotation management



Use of more resistant crop varieties



Monitoring and control of conditions conducive to pathogen development



Control of harmful insects through non-harmful antagonistic organisms



• Farm Frites: Using the Farm Sustainability Assessment checklist

In order to estimate the level of supplier's sustainability, Farm Frites employs the FSA2.0 checklist, developed by the Sustainable Agriculture Initiative Platform – an organisation that helps companies achieve sustainable production of crops. The list consists of 15 areas covering: environment, society and farmer's profit. It is universal and used all over the world, which gives Farm Frites the opportunity to benchmark with other similar companies.

PROPERTY CERTIFICATION
SGS

GGN: 4049928372277
SGS Registration No: SGS PL00163

Conformance Letter

According to
GLOBAL.G.A.P Farm Sustainability Assessment (GGFSA) Add-on
Version 2.1

Issued to
Company
Fam Frites Poland Dwa Sp. z o.o.
Bobrowniki 19,
76-231 Darnica
Poland

The Certification Body SGS Polska Sp. z o.o. declares that the company has been assessed against the add-on and version mentioned above

Product(s)	Volume(s)	GGFSA level
Potatoes	748 ha	Gold
Wheat	1081 ha	Gold
Rapeseed	449 ha	Gold

In case of producer group, the claims are based on the aggregated product volumes sourced from all farms that have been identified as part of the group.
In case of individual producer only one GLOBAL.G.A.P. FSA level per product is possible unless producers registered for parallel production and parallel ownership.

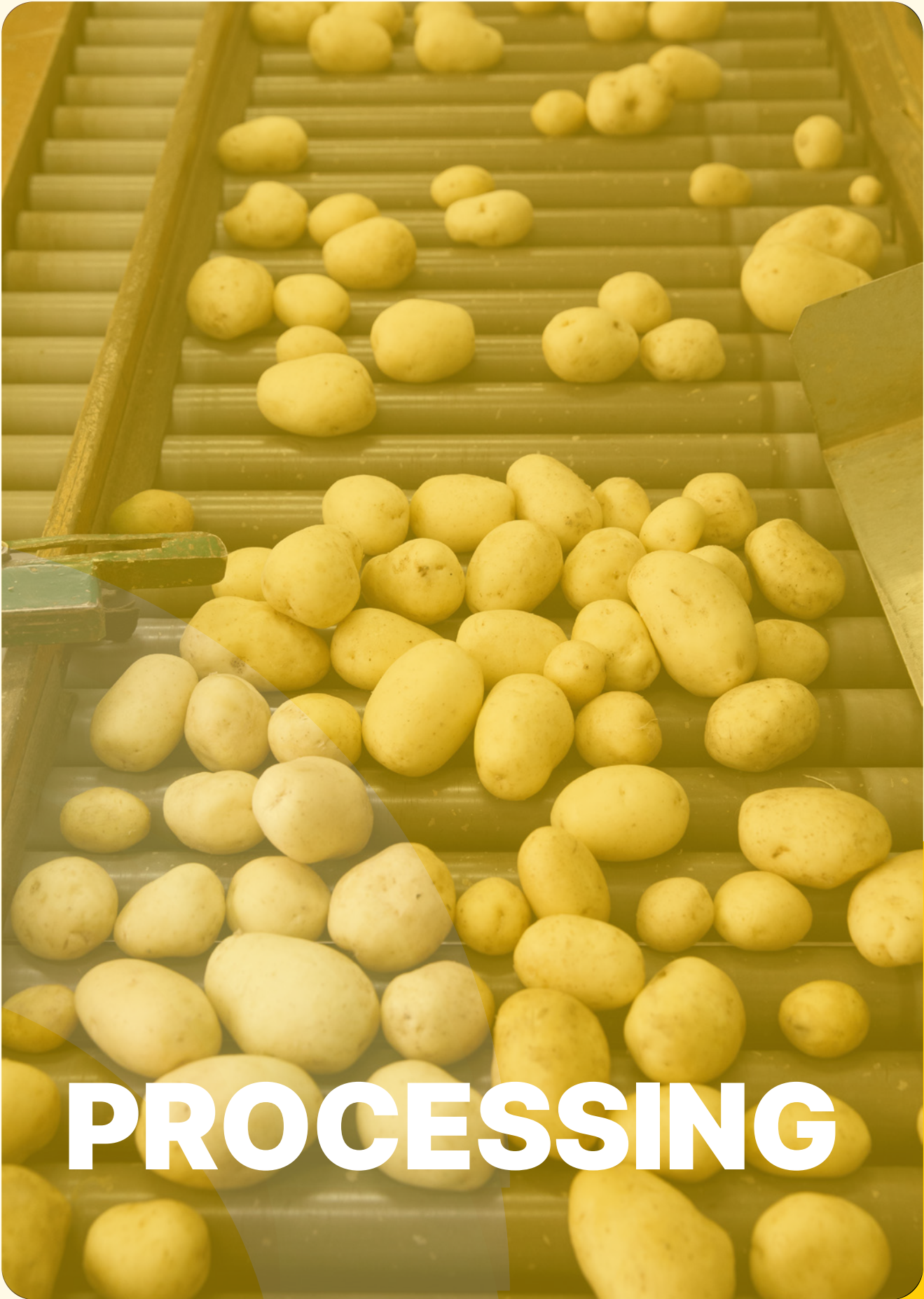
Date of Issuing (Printing date of certificate): 03/12/2018
Valid from: 03 December 2018
Valid to: 02 December 2019

Authorised by: Aleksandra Jeleń
Date of Certification Decision: 03 December 2018 (Issue 1)

The current status of this certificate is always displayed at: <http://www.globalgap.org/search>
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PROCESSING

— Energy and Renewable energy

■ Working to reduce CO₂ emissions and drive renewables across our supply chain

Potatoes play an important role in our food chain and have a lower carbon footprint than most other agricultural products. Potatoes are the world's 3rd largest food crop after rice and wheat (with maize being grown mainly for feed). They contain good nutrients and can be grown sustainably - using less land and water than any other staple crop and therefore generating fewer CO₂ emissions. As one of the richest vegetable sources of dietary nutrients on the planet, this raw ingredient will play an important role in feeding generations to come. Potatoes have one of the lowest climate footprints among crops. They are nutritious, healthy and provide many calories per hectare.

Nevertheless, the potato production process uses a lot of energy and is known as an energy intensive sector. We use heat to peel, blanch, dry and cook the potatoes. We also need a lot of cooling to freeze our products and store them in our freezers at low temperatures. Cooling plants are our sector's greatest consumer of electricity. And because energy consumption is a hotspot, the sector invests a great deal in this area and is working hard to reduce its CO₂ emissions. More precisely, we do our best in Scope 1 & 2 emissions, meaning, where emissions are created from the activities of our organisations as well as where emissions are created from electricity purchased and used by our organisations. In other words, where we can have the greatest impact, i.e., in areas where we can directly control our emissions, we perform well.

As a sector, EUPPA took part in the June 2021 [FoodDrinkEurope decarbonisation study](#) which provides a roadmap to decarbonising the food industry. There are over 90 concrete actions that manufacturers might be able to consider depending on their size, geographical location and the processes they use. Through this report, the efforts of the potato processing sector have been appreciated and we can be seen to perform well compared to other sectors.

■ EUPPA member companies using innovation to drive efficiencies across their businesses

• Lamb Weston / Meijer: Plant upgrade driving production efficiency

The new plant in Broekhuizen vorst was acquired to expand production capacity and one of the first investments the company made was to upgrade the production line, which has led to a number of efficiency gains. It has reduced heat consumption, saving energy, and a heat recovery system and biogas boiler were also installed, increasing the amount of reusable energy available. The plant now contains one of the most efficient production lines in the company. The Broekhuizen vorst plant was included in the company's energy management system in 2019, and added to its ISO 50001 and ISO 14001 multi-site certificates. This means that the plant now complies with the company-wide sustainability, environmental, CO₂ and energy requirements, based on the international ISO 50001 and 14001 Standards. Everyone in management positions has been brought up to the required knowledge level and is working to increase awareness and train line operators on basic environmental and energy knowledge.

- **11er: Avoid, reduce, balance.**

Potato is a natural product, which is why 11er, as a manufacturer of frozen potato specialties, relies on fertile soils, clean water and pure air. The company launched the 11th Climate Initiative with the goal of achieving climate neutrality by avoiding, reducing and offsetting CO₂ emissions along its entire value chain. It seeks to avoid CO₂ before it arises - such as in the growing phase where great importance is attached to short transport routes and in the use of regional ingredients to help avoid CO₂.



— Photovoltaic module to produce own green electricity

- **McCain Continental Europe: Driving energy efficiency and climate innovation**

The company's key motto is to provide "Food that is produced using less of nature's resources in its factories". In 2019, McCain established a central CO₂ Reduction team with the mandate to reduce CO₂ emissions from operations by 50% by 2030 as well as enabling partnerships with growers, transportation providers and suppliers to reduce emissions across the value chain. Main priorities identified and currently managed by multiple workstreams are: improving energy efficiency in plants, decarbonising energy sources, establishing renewable energy generation partnerships (on-site and offsite), piloting CO₂-neutral plants, and investing in CO₂ offset programmes. As of January 2022, the company's Polish factory, in Strzelin, will become the first factory in Continental Europe, to be operating with 100% green electricity thanks to an ambitious, 11,500 panels solar park, one of the key enablers being Solar Park with 11.500 panels.



— McCain Green electricity Solar Panels

- **Schne-frost: Installation of a heat recovery system to produce hot water**

Schne-frost requires high process temperatures to be able to produce its potato and vegetable products. These temperatures are generated by steam which is produced in steam boilers or in thermal post-combustion plants. As part of its sustainability strategy, Schne-frost is constantly rethinking and optimising its processes for a more efficient use of energy. Heat recovery is important in this context. In order to use residual heat in an optimised process, rejected heat from the thermal post-combustion plants is used to warm up process water.

A heat recovery system has also been implemented with two hot water tanks, each with a 120 m³ storage capacity. The high-temperature exhaust air from the thermal post-combustion plants heats the water via heat exchangers and it is then stored in insulated storage tanks. The water is heated to about 65°C to 75°C and used in the production processes, for the heating of the ambient logistic store and for cleaning purposes. The company plans to install another two 120 m³ storage tanks which will enable it to store 480 m³ of hot water. The goal is to reduce gas consumption by 3%, representing a CO₂ reduction of 350 tonnes.



— Schne-frost heat recovery system to produce hot water

- **Clarebout: making sustainable investments in logistics projects**

In 2020 and 2021, Clarebout invested another 50 million euros in its project for a new logistics platform at its Warneton production site. By creating a direct link to the Port Autonome du Centre et de l'Ouest (PACO) terminal, the company will secure local employment while also limiting CO₂ emissions and so realising more sustainable production. The opportunity to link-up with the waterway allows Clarebout to deliver on its strategy of limiting the environmental impact of its business activities.

In addition, Clarebout has chosen to continue investing in its own storage capacities. The company has built a first freezer on the Warneton site to house production from its Neuve-Eglise and Warneton plants. The construction of a second freezer in Warneton in 2020, designed to store special pallets for boat transport, will lead to a substantial reduction in the transportation of frozen products, significantly lowering the flow of heavy goods vehicles and having a positive impact on Clarebout's annual CO₂ emissions reduction.

With its investments in logistics projects, Clarebout reduces the number of lorries on the roads in and around the Warneton sites, lowering both CO₂ emissions and nuisance for local residents. The company has also extended its requirements and reinforced all compensation measures to ensure that the biotope and surrounding environment for local fauna and flora are protected.



- **Agrarfrost: 100% green electricity procurement**

ZERO ENERGY POTATO STORAGE

opportunity

- For the storage of potatoes from September to June a significant amount of energy is expended by the enormous fans used to keep the potato stock cool.
- Agrarfrost's goal was to minimize the energy balance used in newly established potato storehouse with a capacity of 40.000 metric tons.



solution

Combination of measures to neutralize the energy balance in the storehouse:

- installation of a 900 kilowatt peak (kWp) solar power plant on the roof
- improvement of wall and roof insulation to reduce energy loss
- installation of variable capacity fans
- utilization of indoor transportation belts to avoid energy losses through open doors

achievements

potato storage energy consumption	-792 000 kWh per year
solar power plant energy output	+810 000 kWh per year
CO ₂ reduction	411 to CO ₂ per year



- **Agristo: Switch to renewable heat**

In 2020, the renewable A&U power plant, producing green electricity based on non-recyclable wood waste, was commissioned near the Agristo plant in Wielsbeke, Belgium. The waste heat is converted into steam and then transported to the factory where it replaces two large gas boilers, allowing green heat to be produced based on a waste stream and without the import of Canadian wood pellets.

Agristo supports the project by purchasing green heat. With a minimum of 140 GWh a year, more than 90% of the Wielsbeke plant's heat demand can be covered. The other 10% is based on biogas where baking odours are burned in an afterburner.

The investment will reduce Agristo's natural gas consumption by more than 9 million m³ in the coming years!



— Agristo steam pipeline

- **Aviko: The most sustainable cold store worldwide**

Aviko's cold store received the BREEAM-NL Outstanding certificate in February 2021 – the highest possible assessment qualification. With it, the building in Steenderen meets the highest sustainability requirements and makes it the worldwide most sustainable cold store with a score of 97.6%. On the energy, water, waste and pollution components, Aviko even managed to achieve the maximum 100% score. 2,728 solar panels on the roof generate extra energy on sunny days to cool the cold store and water-saving measures ensure minimal water consumption. Rainwater is collected and reused for, eg. flushing the toilets. Both warm and cold residual heat regulate the office climate and there is LED lighting throughout the building. Even the environment of the cold store has been ecologically designed with wadis for bats, birds and insects for maximum biodiversity.

BREEAM is an abbreviation of Building Research Establishment Environmental Assessment Method and is a global, widely used, integral assessment method to determine the sustainability performance of buildings. The assessment looks at almost all aspects of construction, including materials, energy, transport, waste, pollution, water, land use and ecology. Creating a healthy working climate also plays an important role in the certificate awarding.



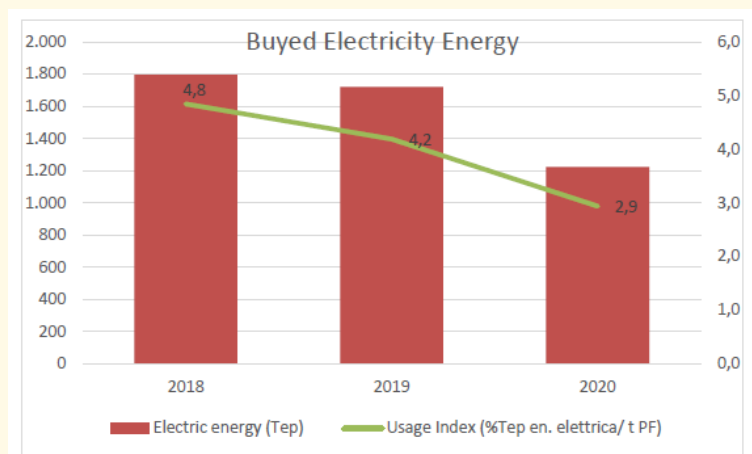
— Aviko's cold store

- **Pizzoli: Advanced technologies delivering sustainable solutions: Methane gas cogeneration**

Pizzoli's methane gas cogeneration plant produces both electricity and heat. The system covers most of the factory's energy needs, drastically reducing the amount of electricity that it purchases on the market.

Valorisation of by-products:

Potato peel and other production waste are converted into gas in a biomass plant and used to generate sustainable electricity. This allows the company to create an environmentally virtuous production cycle, reduce the impact of its waste and receive clean energy in return.



Because potato processing is an energy intensive sector, it is an area in which the sector invests much of its efforts in order to reduce its CO₂ emissions. This explains the greater volume of case studies showcased under this CO₂ emissions section.



— Water use during potato processing

■ Optimising water use during processing

Water is vital to creating our high-quality products. It is not only needed to grow potatoes, but also for well-functioning factories. Water is a crucial resource in the potato operational processes and potato processors are substantial users of water.

Because we are aware of the increasing demand for fresh water as the global population grows, we recognise the value of water to society and continuously strive to minimise our usage - optimising the use of water in our industry and its treatment after use.

One of the environmental key performance indicators on optimisation of water use in our industry is the water use ratio. On average, European potato processors use 3-8 litres (fresh) water per kg of finished potato product. The ratio varies depending on the type of final potato product, the packaging material used, the processing requirements for specific products, the efficiency of operations and water volume reused for processing after purification. EUPPA Members are making serious efforts to significantly reduce their direct water use.

All EUPPA members re-use and recycle water to some extent in their own facilities, where feasible, whilst ensuring it does not impact food safety and product quality and that it complies with applicable regulations. Water for processing is typically recycled and reused to wash soil from incoming lots of raw potatoes, while complying with legal requirements.

Our sector is fully committed to treating its effluent and EUPPA members ensure that all water used in manufacturing processes is safely returned to the environment, at a quality in line with local, national, and EU legislation and standards, and to a level which supports fish and plant life.

■ EUPPA members are harnessing technology to conserve and reuse water

• **Wernsing: Setting technological standards**

Once correctly pre-sorted, the potatoes pass through the so-called pulsed electric fields system. This highly modern process changes the structure of the cells in a way that allows the potato to be peeled and cut easily and cleanly. Previously, this process had to be carried out using hot water. Wernsing developed this new technology - which saves a lot of water and also protects the potato's nutrients - in cooperation with the German Institute of Food Technologies (DIL) and was one of the first companies to introduce it.

• **Agristo: Water is vital**

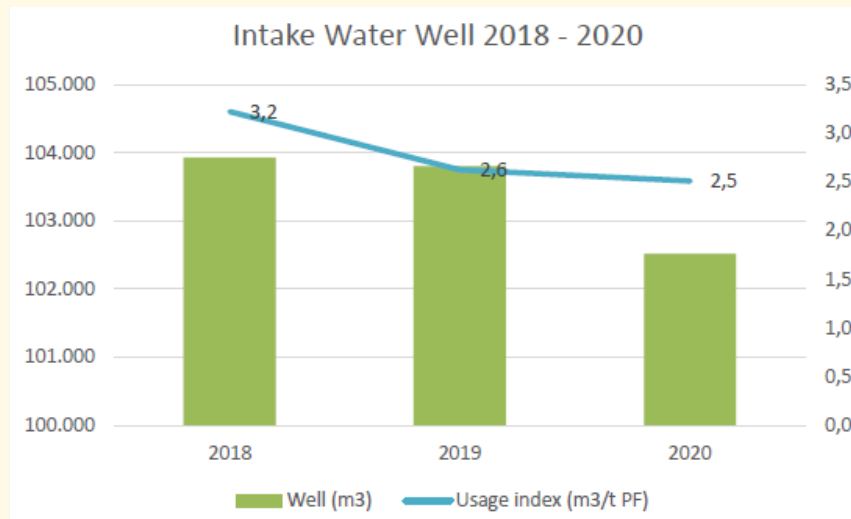
Water is of course needed to grow potatoes, but Agristo also uses water in its factories. Agristo does so responsibly by using water efficiently and optimising water treatment after use. The company uses the latest technologies and has built a completely new water treatment system in Nazareth, Belgium, using state-of-the-art technology. A communal water treatment plant built in Tilburg (The Netherlands) in 2019 together with neighbouring companies is now fully operational, with the companies combining their wastewater for treatment. The complementarity of the waste water from these companies ensures optimisation of the treatment plant operation - and it doesn't end there: the companies do not pump up any groundwater but instead look for alternative sources such as rainwater and surface water. This ensures that their impact on groundwater levels is as low as it can be. They are also exploring various research directions in order to reuse their treated wastewater or offer it for agricultural use.



— Wastewater treatment plant

- **Pizzoli: reusing waste water**

In the Pizzoli plant located in Italy, 25% of its water waste is reused after treatment in its technological process, resulting in a reduction in water consumption.



– Waste and by-products

■ Minimising food waste across the value chain

Food waste has a substantial impact on the environment. In a circular economy, there is no waste, and the economic and nutrition value remains in the food chain. This means making the best possible use of the potato.

Potatoes come in a variety of grades, shapes, and sizes. Through product valuation and innovation, the industry is able to use over 98.5% of the potatoes it processes. For example, it turns smaller potatoes that cannot be made into French fries into specialties such as hash browns or makes small pieces into potato mash. It also makes starch for industrial uses (e.g. paper coatings), animal feed and transforms inedible potato parts and peel into biogas to fuel its plants. In total, our industry sends less than 2% of its combined organic and non-organic waste (e.g. metal, cardboard, plastics) to landfill.

European potato processors make it a priority to reduce food loss and waste from field to fork. This happens particularly in their own operations, according to the strategy “prevent, reduce, reuse, recycle and recover”, in order to contribute to the circular economy and send zero waste to landfill. EUPPA members have a long tradition of adding value to the by-products of potato processing by using them as ingredients in food, feed, biobased materials and/or biofuels.

In addition, because reducing food loss and waste is a top priority for us, **EUPPA is a member of the 2022-2026 EU Platform on Food Loss & Waste** established by the European Commission. Through the platform, EUPPA will support the European Commission, Member States and all actors in the food value chain to achieve the SDG 12.3, i.e., to halve by 2030 per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

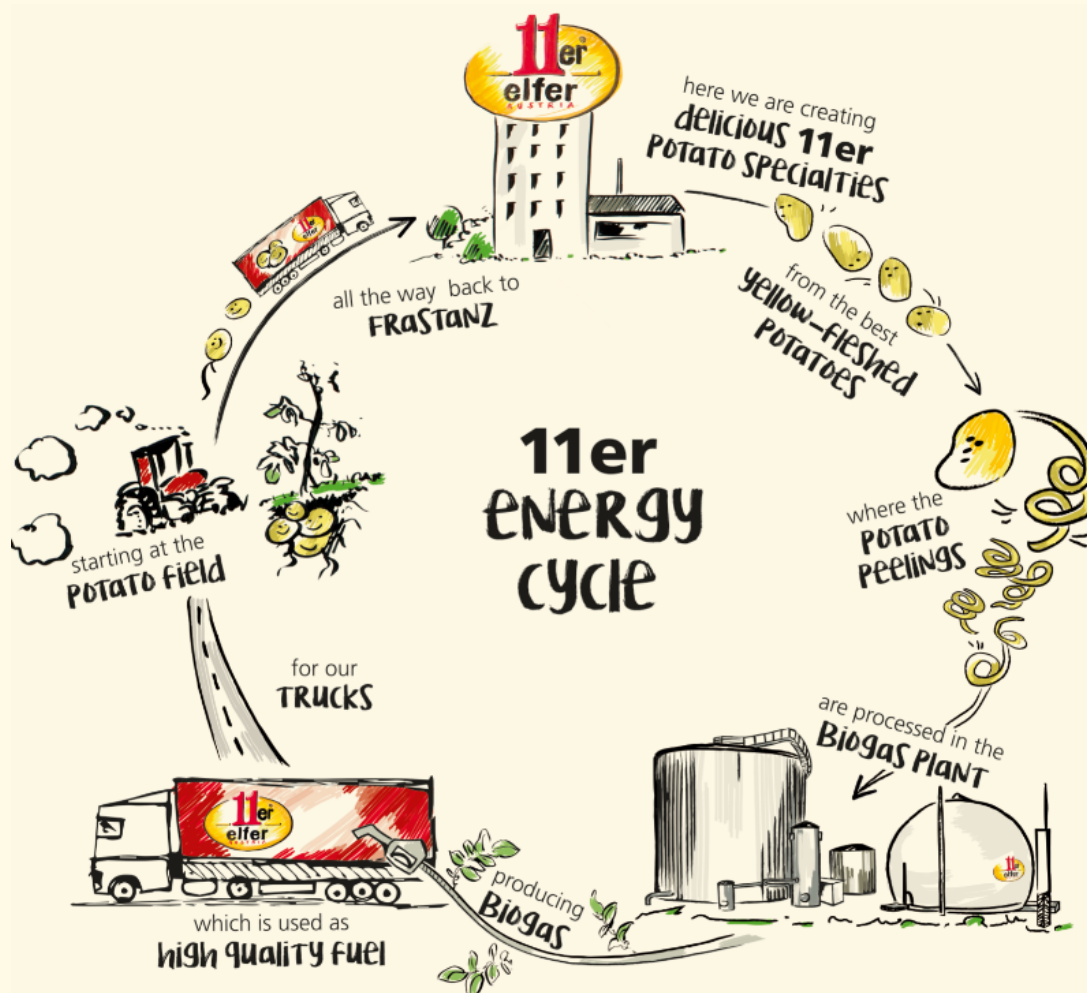
CALL-TO-ACTION

In view of the European Commission's flagship initiative that aims to propose legally binding targets to reduce food waste, EUPPA calls for an approach to Food Loss and Waste reduction that is consistent with other food policy initiatives. Food Loss and Waste is part of the Farm to Fork Strategy and needs to also be considered in other strategies such as those tackling climate change and revising packaging.

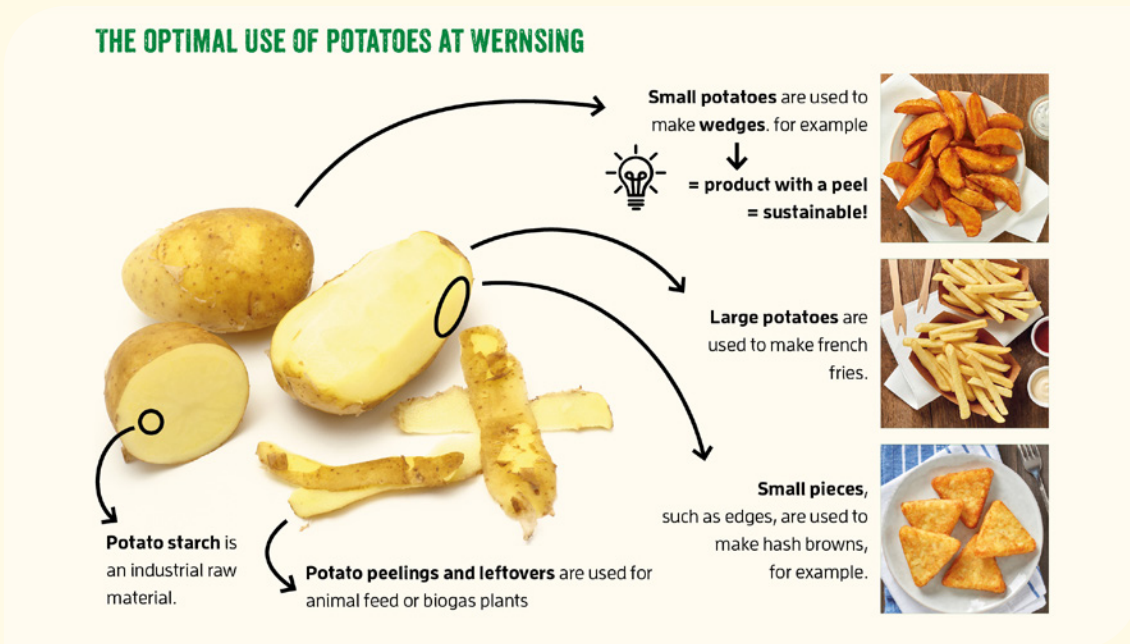
■ EUPPA members are innovating to reduce and reuse waste

• 11er: The 11 energy cycle closes

With the construction of its higher-capacity biogas plant, 11er reached a sustainability milestone. Waste such as the potato peel is a valuable commodity for the company. The energy content of the biomass is converted into regenerative bioenergy on site and in addition to the biogas plant, a biomethane CNG filling station has been set up on the company premises. It enables 11er to refuel some of its potato delivery trucks with the gas obtained from the production residues in the biogas plant. This is how the energy cycle closes. In the medium term, the energy for potato transport and its refinement into French fries, croquettes and other potato specialties should be supplied by the potato itself.



- **Wernsing: optimising the use of potatoes**



— Wernsing: Optimising the use of potatoes

- **Farm Frites: Preventing food waste from the outset**

With its policy of preventing food waste from the outset, Farm Frites optimises the use of raw potatoes in fries and other potato-related products, such as pancakes, specialties and flakes. It also tries to retain as much (environmental) value from the streams as possible and is looking for new ways to reuse streams, so that they can be repurposed for human consumption, animal feed or used for energy purposes. Through the Green Circles programme, together with knowledge institutions (such as Wageningen University and Research and HAs University of Applied Sciences) and local government institutions (Province of Zuid-Holland), the supply chain will be (re)designed in order to close the loops and exclude waste. For example, this could be done by looking into the nutritional value of peels.

- **AgriSto: Valorising waste and byproducts**

AgriSto is aiming at the highest possible valorisation of waste- and byproducts. The best example is the production of potato flakes from potato pieces that are not according to the specs. Instead of sending them to animal feed or anaerobic digestion, AgriSto processes them in its own factory for the production of flakes. The company is undertaking a great deal of research to produce proteins for animal feed from its waste water streams. With these projects, it has reduced the amount of waste going to anaerobic digestion and increased the number of by-products going to high valorisation processes.



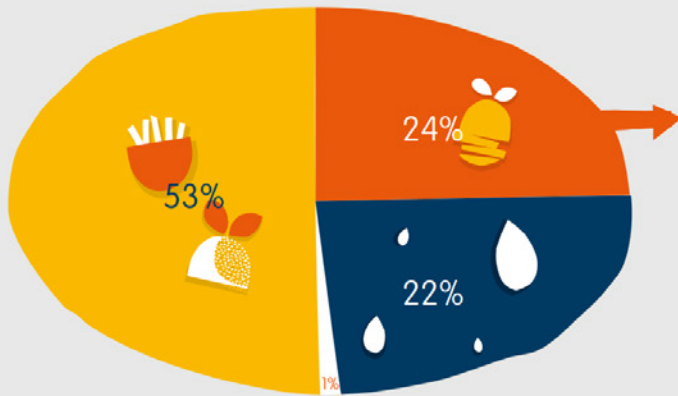
— Potato flakes production

- **Lamb Weston / Meijer: Cutting food waste together**

Cutting food waste only works through collaboration with partners along the entire supply chain. This is why Lamb Weston/ Meijer (LW/M) works with the UK-based Waste and Resources Action Programme (WRAP), which helps companies in the food and beverage industry, including retailers and food service businesses, to create economic and environmental value from reducing food waste. Of the 600 WRAP signatories in the UK, approximately 200 companies are also reporting their food waste data to WRAP and were invited to build Whole Chain Food Waste Reduction (WCFWR) plans. At the beginning of 2020, LW/M started a food waste reduction project, initiated by one of its customers and a major retailer, for whom it produces private label potato specialties from its Wisbech, UK plant. The company looked for opportunities along the entire supply chain to cut food waste in each part of the operational process– from farm to factory and from warehouse to retail store. It is very proud that its Wisbech site is the first UK company from the WRAP signatories to deliver a WCFWR plan and roadmap. The company's goal is to halve its food waste by 2030, aligned with SDG12.3. WRAP defines food waste as any food not consumed by humans or animals or turned into biobased materials, including inedible parts sent to non-food destinations such as anaerobic digestion, composting, incineration or landfill.

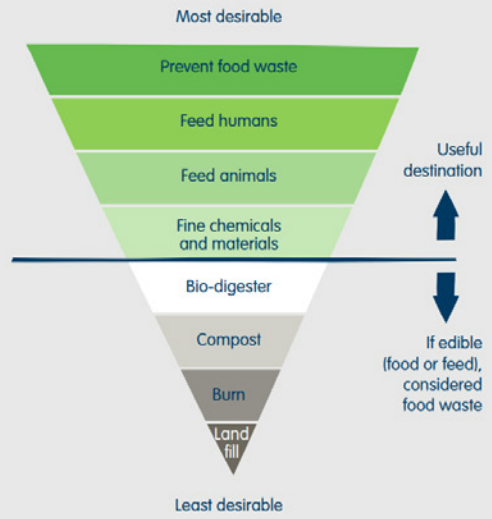
In FY20 1.3 million tonnes of potatoes were turned into 690,000 tonnes of finished potato products. At the same time, 312,000 tonnes of by-products and waste streams were generated. Of this volume, 99.9% is valorised and repurposed or reused sustainably into useful destinations. This means over 215,000 MT of potato by-products (mainly potato peels) were repurposed and used locally as animal feed, representing 69% of the total.

We utilise the whole potato - how?



- Frozen parfried potato products + dehydrated potato flakes
- Water evaporated
- Byproducts and waste streams
- Food Loss (packed finished product)

Moerman Ladder



— Lamb Weston/ Meijer: Potato utilisation



CONSUMERS

– Sustainable packaging

■ Making packaging more sustainable while upholding food safety and quality as well as reducing food waste

Packaging plays an essential role in delivering the sector's products to its customers around the world - safely, environmentally sound and of the highest quality. With packaging, sustainable interventions should never lead to less functional requirements. Loss of product safety and/or quality anywhere in the supply chain will always have even more impact on the environment.

Packaging has played an important role in the growth of the food sector, by helping to reduce food waste, increase convenience, and improve both food quality and safety. Frozen food in particular requires packaging, which is why EUPPA members are developing innovative packaging solutions that will help protect the planet while optimising the safe and secure delivery of their products.

CALL-TO-ACTION

While EUPPA members are taking their responsibility and making great efforts when it comes to investing in more sustainable packaging, the sector recognizes that it remains a missed opportunity due to the lack of recycling at downstream users' level. Therefore, in view of the European Commission's revision of the requirements on packaging and packaging waste in the EU, and its will to boost recycling rates by 2030, EUPPA calls for future availability of recycling infrastructure, partially financed by EPR fees, as a priority criteria for the setting of recycling rates.

■ Using innovation to reduce overall packaging and increase the use of renewable materials

• FarmFrites: "Thinking about the box" best practice

In its project 'Thinking about the box', FarmFrites has started thinking in a courageous, out-of-the-box way, in order to fully understand packaging needs throughout the supply chain. At the same time, the company strives to choose the best packaging fit for its purpose. Optimising its packaging configuration enables it to minimise the use of packaging materials, optimises the packaging processes, and ensures optimum transport and container yields. Test results show possibilities to significantly reduce the amount of material in boxes, as well as packing less 'air' in the boxes, trucks and containers.

- Wernsing: optimising and reducing packaging

OPTIMISED AND REDUCED: MILESTONES IN THE AREA OF PACKAGING

Project	Saving	Use of less material (plastic, cardboard)	Less CO ₂	More recyclability	Reduced costs	Less transport
Introduction of a reusable system for the transport of french fries	Saving of more than 1,000 tonnes of cardboard boxes, 2.1 million reusable crates/ replaced annually		✓		✓	
2018/2019: improvement in the pallet utilisation for a number of deep frozen products	By optimising the dimensions of the boxes and coordinating with customers, the pallet factor was improved by 14% for a number of items		✓		✓	✓
Reduction of film thickness for deep frozen french fries packaging bags by up to 40% for Wernsing branded products	Annual plastic saving > 100 tonnes of film	✓	✓		✓	✓
2019: reduction of the film thickness for the PET snap-on lids	-16% weight reduction for lids	✓	✓		✓	
2019: reduction in the wall thickness for dressing cups	Approx. 20 tonnes of plastic annually	✓	✓		✓	
2019: introduction of a new tube cap	Approx. 5 tonnes of plastic annually	✓	✓		✓	
2019: elimination of non-recyclable plastic through change to recyclable plastics for the entire Wernsing product range	By changing to polypropylene, a recyclability rate of more than 90% could be achieved			✓	✓	
2019: Change to monomaterial packaging by transition from paper to plastic labels	Wernsing branded products in plastic buckets are 100% recyclable		✓	✓		
Recycling of label release liners	61 tonnes of label release liners were recycled in 2018		✓	✓		

— Wernsing: Optimising and reducing packaging

- **Aviko: Collaborating and innovating to reduce packaging**

Aviko has decreased the environmental impact of its packaging through close collaboration with packaging suppliers, researching clever ways of using materials and optimising logistics. As an example, the company used thinner cardboard for all its products in boxes resulting in a reduction of 100 tonnes cardboard per year and 4.800 less pallet movements. In other words: it is using less cardboard to package more products. In addition, through the use of thinner foil for vacuum products, we reduced 20 tonnes of plastic on an annual basis. At the same time, Aviko strives to increase the recyclability of its packaging.

- **Lamb Weston / Meijer: Driving renewable packaging across the business**

Currently, 91% of the company's product packaging is made from renewable materials, based on the total weight of all primary, secondary and tertiary pack materials. Of its plastic packaging (bags, stretch film), 100% is recyclable and made from mono-materials (PE or PP). Boxes, bulk totes and (pallet) slip-sheets are made of 100% FSC-certified paper, containing 88% recycled cardboard. The wooden pallets it uses are part of a European pallet pool and are repaired when needed and reused on average 150 times during their entire lifecycle. Over the past two years, the company has developed a packaging innovation programme combining customer-centric innovation with design for sustainability. It has built a separate sustainable packaging strategy, with clear guiding principles, along two horizons: eco-efficiency and eco-effectiveness. Key to this is reduce, recycle, renew and reuse. LW/M 2030 goal is to have 100% reusable and/or recyclable product packaging and it commits to use less or better packaging.



— More nutritious foods

■ Providing Europe's citizens with food that is nutritious, convenient and safe

EUPPA members provide consumers with safe, tasty, convenient and affordable food, turning potatoes into value-added, high-quality products. Traditionally, potato is perceived as a staple food, and has evolved over recent decades into a very versatile and convenient ingredient that fits in any menu, diet and lifestyle.

Our members' products, while being about pleasure and indulgence, also have their place in a balanced diet. We continuously work on making top quality, safe and always more nutritious foods.

EUPPA members take seriously their responsibility to improve the nutritional value of their products. They work continuously towards innovating the product range and developing products that are, for example, 100% vegetarian (e.g. use of vegetable oils instead of animal oils), and contain less fat, less salt (e.g. with seasoned potato products) and sometimes no gluten. By using healthier fats, less salt and fewer allergens, our products can be consumed as part of a balanced diet. Our members also offer products that are more suitable for oven-baking and/or air frying to reduce the total fat content consumed.

CALL-TO-ACTION

As increasing our range of healthy products is a priority for us, and in order to further enhance information to consumers, EUPPA calls for the European Commission to avoid further proliferation of national schemes and therefore to work towards a single, harmonised and voluntary front-of-pack nutrition labelling system in the EU.

■ EUPPA members increasing the range of healthy products

• Mydibel: Developing healthy products

The entire Mydibel product range is 100% vegetarian, halal and completely vegan (except for potato mash, which contains milk). It uses only ingredients of purely vegetable origin and commits to developing healthier products with lower fat content, by recovering the oil during the production of fries and by developing products that can be prepared in a (high-speed) oven, air fryer or wok. It has reduced salt in its specialty products from 1% to less than 0.7%, increased fibre content in mash and hash browns and offers products that are clean label, free of E-numbers, preservatives and additives as well as gluten-free specialties.

In recent years, Mydibel has launched various healthier products, including: My'Little Hearts for kids, which can be prepared in the oven, is gluten-free, 100% vegan and contains less salt; My'Super Mash, a 100% vegan product with vegetable proteins and fibres; and My'Dlight fries, for the airfryer or oven, which contain 30% less fat, energy and carbohydrates and are 100% vegan.



— Mydibel healthy products

- **Pomuni: Fresh baby potatoes – easy and healthy**

Recently, Pomuni has launched a variety of healthy products - including fresh steamed frozen baby potatoes. They start with a fresh, baby potato, add a small amount of oil and herbs, and then pass them through the steam oven. The result is a 100% natural product, fit for airfryer and (micro)oven.

- **McCain Continental Europe: Making Good Food Better**

As part of its commitment to make its customers' favourite products even better, McCain's focus is to keep improving the nutritional profile of its products – produce good food with recognisable ingredients and provide clear and transparent nutritional information. The company reduced the amount of saturated fats by 75% more than 10 years ago by switching cooking oil from palm to sunflower oil. It actively supports Front of Pack labelling that is based on evidence - aligned with Public Health goals and supported by consumer education. In France, Germany and Belgium, its retail potato products have a Nutriscore rating of either "A" or "B". 100% of its Retail ranges in France, Belgium and Germany display the Nutri-Score. Transparency regarding the nutritional values of products is very important to the company - which is why it has already introduced the Nutri-Score on its packaging. That way, it can help consumers to make more conscious purchasing decisions as part of a balanced diet.



— Fries' nutri-score



WHAT THE SECTOR IS DOING
TO DEMONSTRATE CORPORATE
SOCIAL RESPONSIBILITY

PEOPLE

— Employees' health and safety

■ Acting responsibly towards our employees

All workers should be able to do their work in a safe manner: that is why safety is a permanent focus for EUPPA members. Creating a safe working environment is a high priority.

In certain fields of industry, especially agriculture, the rate of incidents and accidents is rather high. As responsible employers, EUPPA members work continuously to reduce the number of accidents at work and improve the safety culture. Communication and open discussion are key in this.

In addition, when it comes to human rights and working conditions, EUPPA members are committed to:

- ensuring occupational health and safety of their employees, by putting in place appropriate procedures and tools to maintain a safe work environment and control risks and hazards.
- upholding the highest level of integrity in all business interactions, including: supply chain due diligence, product marketing, human rights, conflicts of interest, fair trade and anti-corruption.

■ Walking the talk

• Mydibel: Strengthening its safety culture

Mydibel has invested in strengthening its safety culture in recent years. Together, with consultancy firm NCSP, it audited the way in which it managed health and safety aspects based on document analysis, land audits and discussions with people from board to floor. The audit resulted in a targeted action plan and dashboard to monitor and evaluate the evolution of its safety culture. The action plan, which is currently being implemented, includes:

- More emphasis on communication through Safety Flashes via e-mail and screens.
- An altered training approach. For instance, forklift trainings are now conducted at the workplace to make sure that theory can be put into practice immediately.

The action plan is evaluated on an ongoing basis.

• McCain Continental Europe : For Us, For our Family

“Targeting Zero incident at work”: McCain believes all injuries are preventable and is committed to creating an injury-free workplace. Its plans to launch a new safety brand aim to connect teams with the “Why?” of what it means to work safe. The company works every day to create the conditions and behaviours that ensure a safe workplace. Despite the pandemic, several of its global plants were able to maintain their long-lasting records of zero incidents.





REPORTING

— COVID-19 pandemic

■ The impact of COVID-19

The safety and well-being of teams and customers has always been a priority for EUPPA member companies. As the world adapted to the spread of COVID-19, quick measures had to be taken in order to protect teams in our sector. For example, office staff had to work from home. This can be quite challenging, especially when the job requires a close connection to day-to-day operations. On the other hand, factory workers were still required to work on site to make sure we could deliver to our customers; not only did they run the risk of being contaminated, but they often had to fill-in for sick or quarantined colleagues. Companies had to react quickly in order to put in place the necessary safety protocols.

■ Strengthening our protocol to protect our staff, customers and supply

EUPPA members rapidly deployed best practice COVID-19 safety protocols in all locations around the world, which enabled the teams to be crisis-ready and proactive. Our priority was to keep our teams safe while ensuring the critical delivery of food to our communities and customers. We achieved this through a range of protection measures such as business travel bans, visitor restrictions, health screening, and implementing and adapting significant workplace safety and hygiene practices for all our locations. We have introduced a range of additional hygiene and safety measures across our plants and offices, and those workers who could work remotely, worked from home throughout most of 2020. In our plants, production employees have had to continue working together. To ensure a safe environment, we have introduced additional safety and hygiene measures, including ensuring physical distancing, extra sanitizer and washing facilities, temperature controls, and prohibiting inter-plant travel.

— Corporate sustainability reporting

• Sustainability reporting and the GRI standards

The Global Reporting Initiative (GRI) Standards enable consistent reporting, which helps organisations meet their stakeholders' need for comparable data. The GRI Standards are structured in such a way that organisations can prepare a complete report about their impacts on sustainable development.¹

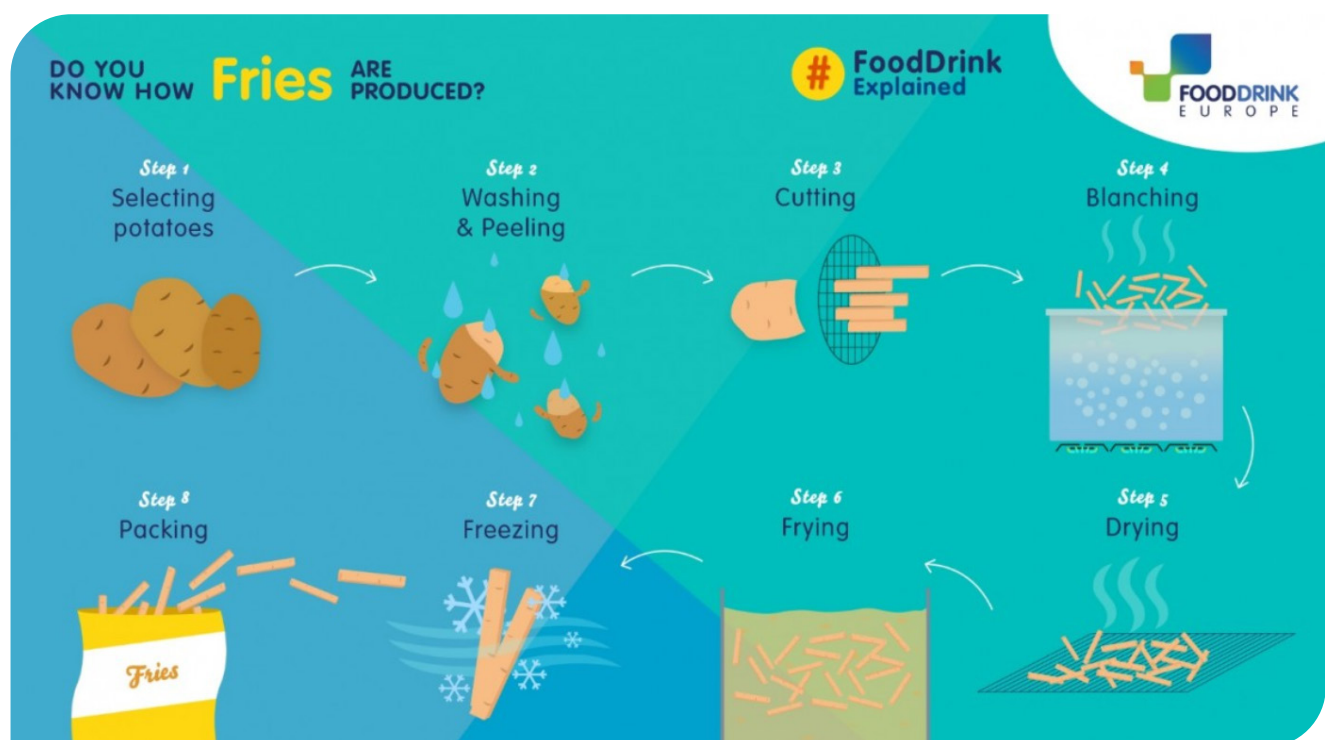
Most EUPPA members have not been waiting for the European Commission proposal for a Corporate Sustainability Reporting Directive to be adopted, foreseeing the adoption of EU sustainability reporting standards. Most EUPPA member companies are already carrying out non-financial information disclosure (sustainability reporting) and have elaborated their sustainability reports on the recommendations of the GRI, using the core option.

¹ https://www.globalreporting.org/standards/media/2458/gri_standards_brochure.pdf

— Conclusion

The cases illustrated in this 2021 Sustainability Report demonstrate that, when it comes to sustainability, EUPPA members are aware of the urgency of the situation. For over a decade now, EUPPA members are taking their responsibility and are proactive in making food systems more sustainable. Despite the challenges and limitations that COVID-19 has entailed, and the setback it has created for EUPPA members in achieving their targets, the companies still fully support the ambitions of the EU Green Deal and the Farm to Fork Strategy.

■ How fries are produced



— FoodDrinkEurope

Curious to find out more about how every single EUPPA member strives to make the European potato processing sector more sustainable? Click on the links below:

- Agrarfrost: [Click here](#)
- Agristo: [Click here](#)
- Aviko: [Click here](#)
- Clarebout: [Click here](#)
- Farm Frites: [Click here](#)
- KMC: [Click here](#)
- Lamb Weston / Meijer: [Click here](#)
- McCain Continental Europe: [Click here](#)
- Mydibel: [Click here](#)
- Pizzoli: [Click here](#)
- Pomuni: [Click here](#)
- Schne-frost: [Click here](#)
- Wernsing: [Click here](#)
- 11er: [Click here](#)

