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# The Future of Food

## Conference Report 2020



## Executive Summary

# The Future of Food

## Conference 2020

1-2 December 2020

Europe is at a crossroads. The way we grow, process and consume food needs to be completely transformed in coming years to comply with the UN Sustainable Development Goals, the European Union's Farm to Fork Strategy, and a raft of national initiatives to promote healthier living, fight non-communicable diseases, tackle climate change and protect the environment. Many current food systems are unsustainable, and hunger is often due to a systems failure rather than a lack of supply. Twin problems of excess and inefficiency are played out in both the environment and health, with obesity and hunger coexisting and on the rise.

While we know **what** we have to do, this year's EIT Food's Future of Food Conference discussed **how** we get there. How do we change the food system through innovation? How do we get the "pull" factor of consumer choice, not the "push" of traditional agri-food sector practices, to guide the adoption of healthier and more sustainable choices? And how do we make sure everyone in the value chain, from farmers to families cooking dinner, is involved in, and empowered through this transition?

Meeting virtually due to the COVID-19 pandemic, around 700 people participated in two days of discussions about how to shape the future of food. A series of plenary and breakout sessions brought together experience from across the continent thanks to panellists who shared their knowledge. Over two days of debate about innovative solutions from the field, to the laboratory, industry and kitchen, several key themes emerged:

- **Don't let a crisis go to waste.** Throughout the conference, speakers noted how the pandemic has made consumers more aware of their food choices: they increasingly consider health aspects, environmental impacts and the importance of reliable and well-functioning supply chains. COVID-19 has changed consumer behaviour and some of these changes are here to stay.
- **Build back better.** The future of food lies in harnessing this new awareness of food issues to accelerate the transition to a better food system. At the same time, the agri-food sector has been hit hard by the economic crisis and needs support. But this is also an opportunity to invest in innovative solutions that can set the sector on a more sustainable and resilient track.
- **Everything starts on the farm.** Farmers risk being overwhelmed by the challenges they are confronted with. They must deal with climate change and biodiversity loss, a technological transition with big data and other high-tech solutions for precision and digital farming being put to work in their sector and a generational renewal issue. In addition, they need to cope with a series of new trends in food consumption habits, which might challenge current market supply but also open new entrepreneurial opportunities.
- **Invest, listen, innovate.** For farmers to successfully transform and innovate their business, Europe needs to engage with and listen to them, and help them navigate the transition, providing also new skills through a true program of lifelong learning. Investments of time, money and smart thinking need to reflect the social and economic conditions on farms. This means taking a co-creative approach in which farmers have a strong voice to help build skill development programmes that will enable them to start innovating from within their context.
- **Habits are already changing.** This dietary shift demands a greater diversity of protein sources, which are not just animal based, along with innovation. Alternative proteins can play a bigger role in European diets. Their mainstreaming requires engagement at every stage of the value chain, and consumer willingness to try new ideas. But consumer behaviour is influenced also by the food environment around them, their access to affordable food and their level of trust in the food system.
- **Meanwhile producers are bringing alternatives from the lab to the table.** Companies are listening to new consumer trends and increasing vegetarian, vegan and flexitarian offers. Innovation has never tasted so good, but how can

the agri-food sector win people's trust to get consumers on board with the transformation of the food system?

- **Consumers need to be at the heart of innovation strategies...** That means keeping them properly informed, even when it comes to uncomfortable truths about the choices which food producers face. Honesty can increase consumer trust, and trust can generate more confidence in the impact of new behaviours, diets, and solutions. These will be more effective when co-created with consumers.
- **... And understand the sustainability of food products.** New labelling based on the Product Environmental Footprint (PEF) methodology could give consumers greater insights into sustainability and reduce the plethora of green claims they experience when shopping. This requires strong stakeholder consensus on what needs to be measured and how, and how to give farmers incentives to improve the sustainability of their products. In addition, sustainability needs to be weighted with taste, health aspects and affordability, which are key for consumers – especially with so many Europeans having lost part or all of their income due to the pandemic.
- **Waste not, want not?** Food waste is a huge problem and innovation can help tackle it at every stage of the value chain, from harvest, to processing, to packaging. Innovation offers many routes to prevent waste or convert it into a new valuable resource, at different stages in the value chain.
- **What goes around comes around.** To build a well-functioning circular food system it is crucial to develop definitions and methodologies to assess what the most impactful routes are and get everyone working together. New links and collaborations will facilitate this alignment. Consumers are increasingly demanding about the packaging food comes in, and the sector needs to embrace the circular economy while keeping safety and quality top priority.
- **Europe is in a unique situation.** The Farm to Fork Strategy and the CAP reform are great opportunities to build more innovation into every stage of Europe's food system. The continent is at the leading edge of sustainability globally, with European farmers using data to farm more efficiently and consumers often willing to pay extra for sustainable produce. But with long supply chains stretching across continents, and differing regulatory environments for food worldwide, this doesn't exist in a vacuum. It requires global coordination and leadership.
- **In fact, the whole world is in flux.** The UN Sustainable Development Goal of Zero Hunger worldwide will be in focus throughout 2021, thanks to the UN Food Systems Summit. COVID-19 disrupted local supply chains, changed consumer habits and left many farmers struggling to get by, particularly smallholder farmers in developing countries. The crisis will leave 130 million more people undernourished: systemic change and innovation are urgently needed to build back better.
- **Investment in innovation is growing.** Entrepreneurship needs to be encouraged, through financial support as well as education. Public funding is available via multiple avenues for innovative start-ups, SMEs and sustainable projects in the sector. Finding the right recipe to combine public and private resources is key. In Europe, innovation in the agri-food sector requires a more entrepreneurial approach to the use of funding, ideally through building a financial ecosystem where the public sector can facilitate the crowding in of private capital via VCs and corporate offices.
- **An innovative education system is needed.** Delivering entrepreneurial education and innovation skills to generate impact can be achieved by rethinking the role and methods of higher education institutions. For European universities, the challenge is to design new ways of teaching in a context disrupted by the pandemic, the digital transition and global competition in the knowledge economy.
- **We need a shared vision to move forward faster.** Improving the food system requires consensus and the ability to make tough choices about how we use resources and invest money. Food and beverage remains a highly fragmented sector, with 285,000 SMEs active in Europe and around 10.5 million agricultural holdings,<sup>1</sup> two-thirds of which are less than 5 hectares in size. There are countless value chains flowing into food and drink production. To transform this sector, we need to scale up solutions much faster than we are doing now. EIT Food will continue to develop a framework for innovation at system level. The greater the ecosystem, the higher the number of collaboration opportunities, and the faster this transformation will take place.

# Programme Outline

## The Future of Food

### Day 1 - The EU Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system: The role of innovation, education and consumer engagement

#### Welcome remarks

**Andy Zynga**, CEO, EIT Food

**Gioia Ghezzi**, Chairperson, EIT Governing Board

Plenary session | Keynote address

**Janusz Wojciechowski**, EU Agriculture Commissioner

#### Plenary session | Presentation

##### Do European consumers trust their food?

Presentation of EIT Food's TrustTracker® data for 2019

**Sophie Hieke**, Head of Consumer Science, EUFIC

#### Plenary session | Panel debate

##### What role can consumers play in the implementation of the EU Farm to Fork Strategy and how can innovation help them?

Moderator: **Paul Adamson**, Chairman, Forum Europe

**Gerda Feunekes**, Executive Director, Netherlands Nutrition Centre

**Sabine Jülicher**, Director of Food and feed safety, innovation, Directorate-General for Health and Food Safety, European Commission

**Nigyar Makhmudova**, Chief Growth Officer, Danone

#### Interactive Breakout Sessions

##### What skills will farmers need to let the EU Farm to Fork Strategy bloom and thrive with it?

Moderator: **Maarten Van der Kamp**, Education Director, EIT Food

**Irène Tolleret**, MEP, Substitute Member of the European Parliament Committee on Agriculture and Rural Development

**Jannes Maes**, President, European Council of Young Farmers (CEJA)

**Marta Kutyna-Bakalarska**, Global Head of Innovations, Maspex Group

**Piotr Romańczuk**, Director of Logistics, Maspex Group

##### Food loss and food waste: How to deliver impact through innovation?

Moderator: **Florence Ranson**, Founder, REDComms

**Paola Giavedoni**, Innovation Director, EIT Food

**Tatiana Tallarico**, Policy officer in the Bioeconomy and Food Systems unit, Healthy Planet Directorate, DG Research and Innovation, European Commission

**Catarina Chemetova**, CEO, FiberGlob

**Geert Maesmans**, Global R&D Leader Cargill Starches, Sweeteners and Texturizers, Cargill

**Rosa Prati**, Research and development Manager, Caviro

##### Innovative solutions to create a sustainable food labelling framework

Moderator: **Andrew Carlin**, Director of Strategic Programmes, EIT Food

**Serenella Sala**, Deputy Head of Unit, Land Resources, Joint Research Centre

**Moira Dean**, Professor, Consumer Psychology & Food Security, Queen's University Belfast

**John Gilliland**, Director of Global Agriculture & Sustainability, Devenish Nutrition

**Veerle Poppe**, Sustainability Strategist and EIT lead, Colruyt Group

#### Closing keynote

**Volker Heinz**, Director & CEO, DIL Deutsches Institut für Lebensmitteltechnik e.V. (German Institute of Food Technologies)

# Programme Outline

## The Future of Food

### Day 2 – Investing in the Future of Food

#### Opening keynote | Interview

**Paolo De Castro**, Member of the European Parliament, S&D Coordinator of the Committee on Agriculture and Rural Development

Moderator: **Simon Pickard**, Network Director, Science | Business

Entrepreneurship | Plenary session | Panel debate

#### High-level plenary debate on Investing in the Future of Food

Moderator: **Simon Pickard**, Network Director, Science | Business

**Hubert Cottogni**, Director & Head of Mandate Management, European Investment Fund (EIF)

**Benoit Buntinx**, Director of Business Creation, EIT Food

**Michael Kleindl**, Co-Founder & Managing Partner, Blue Horizon Ventures

**Magdalena Kozłowska**, CEO, NapiFeryn Biotech

#### Education | Plenary session | Interview

#### High-level conversation on Investing in the Future of Entrepreneurial Education to Boost Europe's Food Innovation Capacity

Moderator: **Paul Adamson**, Chairman, Forum Europe

**Vesa Taatila**, President and Rector, Turku University of Applied Science

**Georgi Dimitrov**, Deputy Head of Unit in Innovation and EIT, DG EAC, European Commission

#### Interactive Breakout Sessions

#### How has Covid19 affected food production and consumption patterns? What are the new market trends shaping the agri-food sector and what innovative solutions is the industry adopting to improve its sustainability and resilience?

Moderator: **Marja-Liisa Meurice**, Director, EIT Food North East

**Klaus G. Grunert**, Professor of Marketing Aarhus University; Founder & Director of the MAPP Research Centre

**Julia Patorska**, Partner Associate, Deloitte

**Begoña Pérez Villarreal**, Director, EIT Food CLC South

**Gonzalo Campos**, Fish and Convenience Meals Marketing Manager EMEA, Sealed Air

#### Towards the 2021 UN Food System Summit: Do we have a global agenda for agri-food R&I and investment to reach SDG2?

Moderator: **Uzoamaka Madu**, Strategic Communications, What's in it for Africa

**Máximo Torero Cullen**, Chief Economist, Food and Agriculture Organization of the United Nations (FAO)

**Saswati Bora**, Head of Food Systems Innovation, World Economic Forum

**Sean Westcott**, Senior Vice-President, Research & Development Europe, PepsiCo

**Andy Zynga**, CEO, EIT Food

#### Closing remarks

**Andy Zynga**, CEO, EIT Food

# Day One | Plenary Session

## The EU Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system: The role of innovation and consumer engagement

### What will it take to implement the EU Farm to Fork Strategy?

The conference got off to a strong virtual start with **Andy Zynga**, CEO of [EIT Food](#), setting the scene. Innovation was the theme of the day: without it, the [EU Farm to Fork Strategy](#) will remain a set of ambitious targets to improve our food, health, and the environment. These include more land in Europe farmed organically, less use of pesticides and antimicrobial agents, and reduction of nutrient losses in the environment.



**Andy Zynga**, CEO, EIT Food

Achieving the strategy's targets will require a complete change of mindset throughout the agri-food value chain. Innovation is vital, but for too long, progress has been driven by the "push" of companies creating new products and techniques and sending them out. Consumer engagement can bring fundamental change, by "pulling" innovation into the market through demand for new foods and ways of making them which are healthier for us and the planet. This disruptive effect will help the market get rid of obsolete products, services and business models. For it to be successful, three things need to happen.

First, consumers need to be at the heart of innovation strategies, even though that means exposing them to the complexities of the food system and the trade-offs faced by farmers and industry. Research and innovation activities should be created with consumers in the room, so there's consensus on the choices we need to make on which solutions deserve investment.

Secondly, consumers need to be properly informed. Prices are not enough: the agri-food industry should deliver a higher level of transparency along the entire value chain, making it clearly available to consumers. This helps build trust: blockchain and AI could prove extremely useful in this field. The food industry needs to better inform consumers about the environmental footprint of products, thus empowering their decision-making process.

Thirdly, consumers will only embrace change and encourage innovation if their needs are met. That means food that is tasty, safe and convenient, but also healthy, sustainable and good for the planet. And affordable, too. "The challenge is to reconcile the need for an affordable price with the need for a fair reward for those who produce food, starting with farmers," Zynga said. "The interests of consumers and farmers should go hand in hand, not against one another."

**Gioia Ghezzi**, Chairperson of the [European Institute of Innovation & Technology](#), highlighted that now is the perfect time to make these changes. In an interview with Zynga after his opening remarks, she noted that the global health crisis has made people think more about the origins of their meals. "In Europe, we've come to take food for granted," she said. "The COVID-19 pandemic suddenly made us realise that it shouldn't be." There are a number of weaknesses in the value chain and logistics, she noted, and Europe as a whole needs to innovate and improve the way we get food on the table.



**Gioia Ghezzi**, Chairperson, EIT Governing Board

EU Agriculture Commissioner **Janusz Wojciechowski** took the virtual floor next for the keynote address, noting that the changes necessary to achieve the Farm to Fork Strategy will involve everyone: farmers, producers and the research community. "The complexity of the food system means there is no single miracle solution to improving sustainability," he said.

That requires actions throughout the food system, with a crucial role for the R&I community. Priorities include education and skills, improving circularity of the food system, reducing food waste and loss, and understanding consumer behaviour. "I cannot stress enough the importance of research and innovation to tackle the challenges we face," he said. Consumers turning to plant-based products and alternative proteins over meat was a recurring theme throughout the conference, with several speakers noting that people are reducing their meat consumption for sustainability reasons.

Innovation is essential, but across much of the world farming is rooted in tradition. The Commissioner highlighted the importance of strong local links, especially in the wake of the pandemic. "The COVID-19 pandemic has demonstrated the advantages of shorter production chains and the need to secure closer ties between producers, processors and consumers," Wojciechowski added, noting that this requires maintaining and supporting family farming in Europe. Educating and empowering farmers as a generation of digital natives taking over Europe's fields was covered in one of the day's breakout sessions.



**Janusz Wojciechowski,**  
EU Agriculture Commissioner

All this comes at a time when Europe's Common Agricultural Policy (CAP), a cornerstone of the EU's work and a huge factor in shaping the way the continent produces food, is [undergoing a fundamental reform](#). The CAP reform will be an important lever to bring about this transition, Wojciechowski noted. In July, the Council brokered an agreement between Member States on the future budget which is "favourable to agriculture as a whole and recognises its strategic role in Europe."

<sup>2</sup> University of Reading, Aarhus University, EUFIC, KU Leuven, Warsaw University

## The importance of consumer trust

Farmers are the most trusted group of people involved in the production, selling and regulation of food for Europeans: that's just one of the insights revealed by the latest edition of the [EIT Food TrustTracker®](#). This evidence-based survey has been developed by a consortium of EIT Food partners<sup>2</sup> to measure consumer trust in the food industry. Based on scientific insights, the team developed a model for measuring consumer trust, and the data is tracked annually to monitor developments and compare trust levels over time.

**Sophie Hieke**, Head of Consumer Science at [EUFIC](#), shared the EIT Food's TrustTracker® data for 2018-2020 as the day's first presentation. The 2020 version surveyed 20,000 consumers in 18 EU countries. The model they have developed based on the surveys allows them to do two things: firstly, explain the formation of consumer trust in the food value chain, and secondly understand the role of trust in consumer behaviour. The first part of the model has been successfully validated and published in a scientific journal. "Trust can have far-reaching behavioural consequences," Hieke said. The full wave of data collection will be released next year, and she shared some sneak peeks into the latest insights. She said the next stage is further development of the tool so they can measure more: trust in specific foods, brands and food technologies.

The consortium is also working on the next scientific publication to validate the second part of this model: understanding how trust affects consumer behaviour. All this matters, she said: when trust is strong, it is easier to get consumers on board with innovation. The adoption of plant-based diets is an example of consumers accepting innovations that can move the EU towards a healthier and more sustainable food system.



**"Do European consumers trust their food?"** Presentation of EIT Food's TrustTracker® data for 2019 - **Sophie Hieke**, Head of Consumer Science, EUFIC

“The reality is that consumers have to do a lot of trusting when it comes to their food because many of the things that they value in their food, have to do with concepts that they can’t see, touch, taste or feel,” such as sustainability or authenticity, she explained. And that in turn requires genuine openness from everyone in the food value chain. “Be honest about what you’re doing, don’t sugarcoat it. Do tell people that sometimes you need the big farms, the ones where you have 10,000 cows next to each other.” People can then make informed decisions about what, where and how they buy.

That neatly encapsulates several of the morning’s themes: informed, educated consumers are vital, but how does that translate into the all-important “pull” factor of consumer-led demands for change?



(Clockwise from left) **Paul Adamson**, Chairman, Forum Europe (Moderator), **Sabine Jülicher**, Director of Food and feed safety, innovation, Directorate-General for Health and Food Safety, European Commission, **Nigyar Makhmudova**, Chief Growth Officer, Danone, **Gerda Feunekes**, Executive Director, Netherlands Nutrition Centre

## Making the Farm to Fork Strategy transition happen: The role of consumers

The Farm to Fork Strategy partly relies on consumers wanting, and getting, healthy and sustainable food. All actors in the food chain should see providing this as an opportunity, and that was the subject of the morning’s plenary panel, which discussed questions including what “consumer-centricity” means in practice, and how innovation can help. **Paul Adamson**, the Chairman of [Forum Europe](#), presided over a three-woman panel gathered to discuss these vital issues. Participants heard from Sabine Jülicher, Director of food and feed safety and innovation in the [Commission’s DG SANTE](#), Gerda Feunekes, Executive Director of the Netherlands Nutrition Centre and, bringing a vital industry perspective, Nigyar Makhmudova, Chief Growth Officer of [Danone](#).

**Sabine Jülicher** highlighted that Europe faces a double nutrition crisis: at the same time that obesity rates are rising across the continent, around 10-15% of the population cannot afford a quality meal every second day, hence the rise in food banks. Improving diets is a factor that can help this, but how can Europe make this happen?

There has been a huge rise in interest in organic and so-called natural food solutions since the pandemic, [according to McKinsey research](#), explained **Nigyar Makhmudova**. “Food security is becoming the number one concern among consumers,” she said, with concerns about food origin, local sovereignty and geopolitical instability driving this thinking. At the same time, Danone “do a lot of listening to consumers,” and the top conversation is about diet. That includes the planetary health diet, where the environmental impact of foods is as important as their calorie content, and vegetarian, vegan and flexitarian (where people try to eat less meat overall without completely excluding it) regimes.

“In Danone, we choose to embrace the ongoing food revolution, rather than fighting it,” she said. “We’re responding by actively shifting our portfolio and promoting the flexitarian diet, and increasing the part of our portfolio which is plant-based food solutions.” Plant-based foods are also good for the planet, which the company is working on as consumers show more interest in where their food comes from and how it’s grown. “Health of people cannot be bought at the expense of the health of the planet,” she added.

Work on biodiversity includes a partnership with French farmers to stop Williams pears disappearing from the country; the company is also partnering with US firm [HowGood](#), which measures sustainability. Together, they are using AI and big data during product formulation, so they know the environmental footprint before new foods hit the shelves. Another trend identified from consumer research is food as medicine, especially during lockdown, with people thinking more carefully about what, and how, they eat.

Those are habits that are best formed in early life, noted **Gerda Feunekes**, Executive Director of the [Netherlands Nutrition Centre](#). “Start in schools -- make sure children know how to prepare a meal,” she said. When it comes to eating right, “we have to make it easier for people to make those choices,” and the Farm to Fork Strategy does a lot to support this, she added. Retailers also have a role to play, and should make healthier options more available instead of promoting beer, crisps, sweets and the like. Researchers should also look into what makes food attractive. “There’s speculation that the texture of food and the speed of eating is a factor in obesity,” Feunekes added.

Consumers in Europe take safe, tasty food for granted, which puts the onus on producers such as Danone to make healthier, more sustainable products while living up to these expectations, as Makhmudova explained. We need to “give people choice, but it shouldn’t be a compromise,” between health and taste, she said. Tasty and nutritious is possible: look at the rise of plant-based milk alternatives, where consumers have an array of choices, she added.

Knowing how to choose between these ever-expanding options, many of them completely new, requires sound information about what’s on offer. Jülicher expanded on the European Commission’s proposals for giving consumers greater knowledge through harmonised front of pack labelling, although that has to be part of a bigger movement as well, involving players at every stage of the value chain. “We don’t want the consumer to be left alone,” she said. “The goal is to actually change the food environment.”

This also means being ready to adapt. New rules need to be future-proof, as we constantly understand more about the changes on our planet and how to best manage them. “We need to think about what sustainability looks like now, [but] in 10-15 years everything might have changed,” Jülicher added. Questions from the floor highlighted the role of logistics - shorter supply chains are part of the solution - and the consumer’s role in reducing food waste, which was covered in a breakout session.

All the panellists highlighted that the information currently available to consumers is the tip of the iceberg: a holistic view is necessary to bring about genuine change. The use of chemicals during cultivation, fuel for transport, packaging choices and use-by dates all affect the environmental footprint of the food we eat. And explaining that clearly means everyone working together. “No-one is big enough to do it on his or her own” said Makhmudova. “We are all operating in a very interconnected environment.”

## The future architecture of the food system

Rounding off day one of the conference, **Volker Heinz**, Director and CEO of the [German Institute of Food Technology](#) (DIL) painted a bleak picture of the pandemic’s impact on the world: almost 100 million people worldwide will be pushed back into extreme poverty in 2020, the first rise in global poverty since 1998. “Many current food systems are unsustainable,” he warned. “Hunger is often a systems failure rather than a lack of supply.” Twin problems of excess and inefficiency are played out both in the environment and health, with obesity and hunger coexisting and on the rise.

That must not continue. “A disruptive system change is ahead of us,” he said. “The new food system will have a significantly different architecture: it will follow different rules and must be understood with different metrics.” With some parts of the system due to be pushed into a “death spiral,” the food industry should look to other sectors that have undergone rapid and disruptive change such as the information economy, which has emerged as a larger, but fundamentally different, business in recent decades.



**Volker Heinz**, Director & CEO, DIL Deutsches Institut für Lebensmitteltechnik e.V. (German Institute of Food Technologies)

“The new food system will have to be based on a near to zero footprint,” he said. “In essence, we are thrown back to combining flows of mass, energy, information and capital in a different way, as the ruling economic model does, in a kind of push-flow, where offer is creating demand.” For too long now, providing the vast quantities of carbohydrates, protein and fat necessary to fuel human life on the planet has helped the food industry to be profitable in “business as usual mode,” he said, but a change is coming. “Focusing on what we really need to eat, and organising food as a pull flow will for sure have an impact on traditional economic schemes as well,” he said. It’s also very clear where we need to start: innovation. “As long as we base our protein supply to 55% on meat and dairy there is a 400-pound gorilla standing in the door to sustainability,” he said. “At least we know where we have to start and change the rules of the game: the forefront of innovation is right there.”

# Day One | Breakout Session One

## What skills will farmers need to let the EU Farm to Fork Strategy bloom and thrive with it?

Farmers are essential for food production, but they sit at the start of the value chain, often very far from consumers. If consumers are ready to embrace change and pull new solutions into the market, the question is whether farmers are ready and able to provide what new diets require. Thus, this session discussed the skills which farmers need to change and innovate the food system, and adopt new practices and technologies to meet the objectives of the EU's [Farm to Fork Strategy](#). Speakers with experience of rural life across Europe discussed learning, living and innovating, as well as whether the EU needs new instruments and programmes to tackle this challenge. Here are a few of their insights:

- **Everything starts on the farm.** According to Eurostat, EU farms used 173 million hectares of land for agricultural production in 2016, 39% of the total land area of the EU. The agri-food sector is of fundamental importance to the continent, but how can it evolve to meet the challenges of the green transition, the Farm to Fork Strategy and UN Sustainable Development Goals?
- **Talk with farmers, not at them.** Getting farmers on board with the goals means giving them learning they can process without taking up production time or leaving them feeling patronised, said **Irène Tolleret**, MEP, Substitute Member of the [European Parliament Committee on Agriculture and Rural Development](#). On the other side, farmers have been subject to “agri-bashing” when they do deploy new technologies which are not trusted by public opinion, so their reluctance can be understood! Europe needs to find an approach that works.

### Speakers:

**Moderator: Maarten van der Kamp**, Director of Education, EIT Food

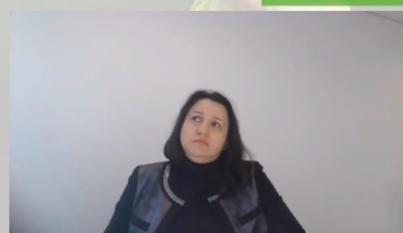
**Marta Kutyna-Bakalarska**, Global Head of Innovations, Maspex Group

**Jannes Maes**, President, European Council of Young Farmers (CEJA)

**Piotr Romańczuk**, Director of Logistics, Maspex Group

**Irène Tolleret**, MEP, Substitute Member of the European Parliament Committee on Agriculture and Rural Development

### The Future of Food Conference 2020



(Clockwise from left) **Maarten van der Kamp**, Director of Education, EIT Food (Moderator), **Jannes Maes**, President, CEJA, **Marta Kutyna-Bakalarska**, Global Head of Innovations, Maspex Group, **Piotr Romańczuk**, Director of Logistics, Maspex Group, **Irène Tolleret**, MEP

- **Farmers are dealing with a lot right now.** “In essence the most important skill farmers will need in the coming decade is adaptability,” said **Jannes Maes**, President, [European Council of Young Farmers](#) (CEJA). That includes climate change, changing markets, sustainability goals, societal shifts, new legislation and the day-to-day business of running a farm.
- **Including a generational shift.** “We need the way we teach farmers to take into account the age pyramid of farmers, and link younger farmers with older farmers on a local basis and make that simple,” added MEP Tolleret.
- **Best practice shouldn’t stop at borders.** “An Erasmus program for young farmers is something that could absolutely [be useful],” said Maes. “We speak the same language... even if it’s not actually the same language.” Farmers know the same struggles and ambitions across Europe: sharing knowledge in a peer-to-peer fashion can help tackle shared challenges, in particular climate change. Panellists raised the example of knowledge clusters, which have traditionally been focused on tech and manufacturing but could be relevant for agriculture.
- **Big data for small farms.** “Digitalisation, AI, data are not such easy issues,” said **Marta Kutyna-Bakalarska**, Global Head of Innovations at [Maspex Group](#), one of Central and Eastern Europe’s largest food production groups. Farmers now have vast amounts of data on soil, livestock and weather, “but only a few have access to the advanced digital tools that would transform this data into actionable insights.”
- **There’s a lot of room to change.** In most areas, farming is still very manual, panellists said. To unleash the potential of remote sensors, satellites, robotics and crisis management for weather and pest events, there needs to be better connectivity so that the vast amounts of information can be turned into useful instructions. “The best way to access this infrastructure is collaboration,” said Kutyna-Bakalarska. “Farmers are learning to deal with data,” and EU support, including financial support, can help.
- **Innovation doesn’t just happen in laboratories.** Knowledge and innovation are essential for a smart, resilient and sustainable agricultural sector. The CAP reform mentions increased investment in research and innovation for rural communities. It is therefore essential to build stronger agricultural knowledge and innovation systems (AKIS) to boost initiation and development of innovation projects.
- **And knowledge exchange can happen in multiple forums.** Maspex is one of the biggest producers of fruit, vegetables and cereal in CEE, including thousands of tons of pasta flour. This represents a steep learning curve, because twenty years ago it was impossible to grow durum wheat in Poland, but now they do. “Our collaboration with farmers is successful because we treat each other as partners,” said **Piotr Romańczuk**, Director of Logistics, Maspex Group. They host meetings with senior producers, scientists, and universities, and he suggested a digital platform where farmers can exchange best practices rather than seeing each other as competitors.
- **Change doesn’t happen without investment.** Investments of time, money and smart thinking need to reflect the social and economic conditions on farms. This means taking a co-creative approach in which farmers have a strong voice to help build skill development programmes that will enable them to start innovating from within their context. Moderator **Maarten Van der Kamp**, the Education Director of [EIT Food](#) summed it up nicely. “It’s about connecting different pieces of the puzzle and making this happen in the local context of the farm.”

# Day One | Breakout Session Two

## Food loss and food waste: How to deliver impact through innovation?

The figures are shocking: [according to the UN](#), an estimated 1/3 of all food produced – equivalent to 1.3 billion tons, and worth around \$1 trillion – is wasted every year. The UN Sustainable Development Goals aim to halve per capita food waste at the retail and consumer level by 2030, and reduce food losses along the food production and supply chains. How can Europe play its part in achieving this?

As part of the Farm to Fork Strategy, the Commission will propose legally binding targets to reduce food waste across the EU, by the end of 2023, and revise EU rules on date marking ('use by' and 'best before' dates), by end 2022. But how will this work in practice? How can we reduce food loss and food waste through circular solutions? Innovation should be guided by impact, but how do we measure this? The second morning parallel session brought together policymakers and industry experts to discuss how innovation can help reduce waste at every stage of the process. Here are their key takeaways.

- **You have to be able to measure something before you can fix it.** What is included in definitions and targets? Waste before or after harvest, edible parts of animals? How do you measure the impact of alternative solutions to reduce waste and recycle? "Only when you can measure something can you compare and change," pointed out **Paola Giavedoni**, Innovation Director of [EIT Food](#).
- **And that's what's happening.** "Since 2018, member states have had to report food waste levels to the EU," said **Tatiana Tallarico**, a policy officer in the [Bioeconomy and Food Systems Unit](#) at the Healthy Planet Directorate of the European Commission's DG Research and Innovation. That should lead to the EU developing its own targets on food waste rather than relying on UN ones.

### Speakers:

**Moderator: Florence Ranson**, Founder, REDComms

**Catarina Chemetova**, CEO, FiberGlob

**Paola Giavedoni**, Innovation Director, EIT Food

**Geert Maesmans**, Global R&D Leader Cargill Starches, Sweeteners and Texturizers, Cargill

**Rosa Prati**, Research and Development Manager, Caviro

**Tatiana Tallarico**, Policy Officer in the Bioeconomy and Food Systems Unit, Healthy Planet Directorate, DG Research and Innovation, European Commission

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(Clockwise from left) **Florence Ranson**, Founder, REDComms (Moderator), **Paola Giavedoni**, Innovation Director, EIT Food, **Tatiana Tallarico**, Policy Officer in the Bioeconomy and Food Systems Unit, Healthy Planet Directorate, DG RTD, European Commission, **Catarina Chemetova**, CEO, FiberGlob, **Rosa Prati**, Research and Development Manager, Caviro, **Geert Maesmans**, Global R&D Leader Cargill Starches, Sweeteners and Texturizers, Cargill

- **Companies are busy gathering data, too.** Corporates already measure things like water use, energy, farmer livelihoods, human rights aspects and optimizing feed systems, said **Geert Maesmans**, Global R&D Leader at [Cargill's Starches, Sweeteners and Texturizers business](#).
- **Embrace technology.** Stock optimisation, platforms to connect farmers and consumers, digital marketplaces to facilitate the trading of agricultural side-streams and food industry by-products, dynamic pricing at retail level: all of these can help eliminate waste and they are all enabled or improved by sharing data and connectivity.
- **Innovation can change what is and isn't waste.** Peat is a non-renewable raw material, extracted in vast quantities to grow crops in greenhouses. Peat bogs are carbon sinks, so removing it leads to increased GHG emission. FiberGlob is an organic peat replacement made from industrial wood pulp waste. It's a double win: it will help growers produce quality plants using less peat, while avoiding the incineration of wood pulp waste. "We try to understand how the [reduction in] greenhouse gas emission can be measured," taking into account both these effects, said **Catarina Chemetova**, CEO and Founder of [FiberGlob](#). "If we are not extracting the peat bogs, the balance of the greenhouse gas measure can be seen as an economic value." And the waste isn't waste anymore.
- **Reducing waste is a multi-stage process.** Italian farm co-operative [Caviro](#) takes millions of tons of waste from the winemaking process, and makes it into tartaric acid, polyphenol and other food ingredients. "After this, we still have an exhausted material," notes Research and Development Manager **Rosa Prati**. That in turn becomes fertiliser, biogas and energy through anaerobic digestion. Innovation means also thinking about the waste from the waste.
- **Who's involved in those stages matters.** There's also a question about whether dealing with waste within, or outside, a company makes most sense. Maesmans explained Cargill's process for analysing options to reduce waste, with consideration including speed, risks of undesired consequences, cost and impact. "If I solve my problem by pushing it elsewhere, have I solved it?" he pondered.
- **Collaboration is key to cut food waste across the value chain.** Innovating to reduce waste needs to bring together producers, farmers, academia, consumers and all stakeholders through an integrated approach. "Our projects really need to deliver concrete results on the market," said EIT Food's Giavedoni. "One of the key components when we select projects is the co-creation factor."
- **Converting food waste into a resource is an opportunity for farmers.** Everyone has a role to play. Reducing waste is "a good opportunity for the agricultural system and farmers to work together," says Caviro's Prati. "We can modify our model, we can improve our sustainable system."
- **Consumers have a big role to play.** "If we don't convince people that food waste is a choice," work done upstream loses its impact, warns Cargill's Maesmans. Across that value chain there's "loss that's happening in my refrigerator" as well as a part "that's happening in my company." Combating waste at different stages in the value chain needs different solutions. [A study by the European Commission](#) estimates that up to 10% of the 88 million tonnes of food waste generated annually in the EU are linked to date marking, waste which happens once food has been purchased. The EU is looking at the use by, best before and other [dates on packaging](#) as part of a labelling review.
- **Packaging isn't all or nothing.** Following a question from the floor about removing packaging, panellists noted that it's not a black or white situation. "The first criteria, which we should never forget, is about food safety," said Maesmans, which can't be compromised. After that, reducing packaging needs a nuanced approach: "We will have to work with different solutions at different scales; retail, home consumption, farmer." Here again, innovation will change everything. "We can reduce packaging, reduce the thickness of packaging, there are several steps before [removing it completely]," said EIT Food's Giavedoni. "We need to be open to new technologies and new ways to approach this."

# Day One | Breakout Session Three

## Innovative solutions to create a sustainable food labelling framework

Food labelling: One theme raised in the plenary session was that consumers increasingly want to make better choices for themselves and the planet, but lack the information to do so. Consumers across Europe are familiar with labelling which shows nutrition and some origin information, but the [Farm to Fork Strategy](#) aims to go beyond this.

The Commission will examine ways to harmonise green claims and create a sustainable labelling framework that covers the nutritional, climate, environmental and social aspects of food products. This panel tackled questions about labelling, choice and how Europeans can switch to a healthier and more sustainable diet, bringing together experts from the [EU Joint Research Centre \(JRC\)](#), academia, farming and retail to discuss what comes next.

- **Work has been ongoing on a standardised labelling scheme for environmental impact since 2013.** The new system will be based on [Product Environmental Footprint Category Rules \(PEFCRs\)](#) and Organisation Environmental Footprint Sector Rules (OEFSRs), which can be used for calculating the Environmental Footprint (EF) of products and organisations in scope.
- **The European Commission's Environmental Footprint (EF) pilot phase is complete.** It ran from 2013-2018 and saw thousands of stakeholders take part in a pilot phase to work out the environmental footprints for beer, packaged water, dried pasta, dairy, olive oil and wine. Testing of the standards is now in the transition phase, assessing a range of environmental impacts from climate change to terrestrial eutrophication, which are then normalised and weighted to provide a single score.

### Speakers:

**Moderator: Andrew Carlin**, Director of Strategic Programmes, EIT Food

**Moira Dean**, Professor, Consumer Psychology & Food Security, Queen's University Belfast

**John Gilliland**, Director of Global Agriculture & Sustainability, Devenish Nutrition

**Veerle Poppe**, Sustainability Strategist and EIT lead, Colruyt Group

**Serenella Sala**, Deputy Head of Unit, Land Resources, Joint Research Centre

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(Clockwise from left) **Veerle Poppe**, Sustainability Strategist and EIT lead, Colruyt Group, **Andrew Carlin**, Director of Strategic Programmes, EIT Food (Moderator) **Moira Dean**, Professor, Consumer Psychology & Food Security, Queen's University Belfast, **Serenella Sala**, Deputy Head of Unit, Land Resources, Joint Research Centre, **John Gilliland**, Director of Global Agriculture & Sustainability, Devenish Nutrition



# Day Two | Plenary Session

## Investing in the Future of Food

The second day of the 2020 EIT Food Future of Food Conference continued the theme of **how** we achieve the UN Sustainable Development Goals, deliver the EU [Farm to Fork Strategy](#) and manage the climate transition through innovation – and specifically, how we fund that innovation. In order to increase the resilience and competitiveness of Europe's agri-food sector, the Farm to Fork Strategy outlines the allocation of considerable resources to R&I. But how should that work in practice? The morning's sessions focussed on this, with an emphasis on how thinking has evolved in light of the latest pandemic.



(Left to right) **Simon Pickard**, Network Director, Science | Business (Moderator), **Paolo De Castro**, Member of the European Parliament, S&D Coordinator of the Committee on Agriculture and Rural Development

MEP **Paolo De Castro**, S&D Coordinator of the [Committee on Agriculture and Rural Development](#) and former Italian Agriculture Minister, deftly identified the big themes in his opening remarks. "The big question is how to produce more, with less," he said. "How can we do this process with farmers, not against farmers, and I very much think the key answer to this question is innovation."

Innovation has vast potential to make the way we farm more sustainable. "Instead of using chemicals, we can use genetics," he said, pointing to new crop breeding techniques which rely not on moving genes from one species to another but manipulating the plant's own structure. "Today we have extraordinary examples of how we can produce new varieties resistant to disease." Europe should also embrace precision farming technology. Using drones, satellites and big data can enable a more targeted and efficient use of chemical products "exactly where the land needs the intervention, and not everywhere." That in turn would make farmers more competitive and reduce the use of chemicals.

Investment in research also needs to make it to the field to affect change. "We have a problem with our farming community, because sometimes they are very old," De Castro said, which is why Europe is investing in programs for young farmers. "They have studied, they have a degree, they're much more at ease getting with new technology – the more young farmers we have, the easier it is to get innovation into agriculture."

Overall, he was confident that Europe can bring together farmers, producers, and consumers – whose wishes should be respected, as they were with the GMO crops debate at the turn of the century – to reach sustainability targets. "Europe, right now, because of the pandemic, is showing an incredible will to work together," he said. "When we talk about technology, when we talk about everything, no one country can give the answer alone... Europe can give the solution." One potential solution is investment. NextGenerationEU is a €750 billion one-off recovery instrument backed by the European Commission, which will contribute funds to help finance EU programmes such as [Horizon Europe](#), [InvestEU](#) and the [European Agricultural Fund for Rural Development \(EAFRD\)](#). But how will that work in practice?

### Building an innovative investment framework to deliver economic and societal impact

The plenary panel, on "Investing in the Future of Food," tackled tough questions about money including the role of public and private investors in facilitating innovation, EU-specific tools to promote and facilitate investment in agri-food, and what attracts investors to the agri-food sector.

Moderator **Simon Pickard**, Network Director of [Science|Business](#), welcomed Hubert Cottogni, Director & Head of Mandate Management at the [European Investment Fund \(EIF\)](#) and Benoit Buntinx, Director of Business Creation at [EIT Food](#). They were joined by Michael Kleindl, Co-Founder & Managing Partner, [Blue Horizon Ventures](#), a food technology-focused venture capital fund with more than €150 billion of Assets under Management, and Magdalena Kozłowska, CEO of [NapiFeryn Biotech](#), which makes food grade protein from rapeseed cake – currently a waste product from the rapeseed oil-making process.

Food is the world's largest market, so there are a lot of opportunities. "Technology can really accelerate food system

transformation,” said **Benoit Buntinx**, Director of Business Creation at EIT Food. “The food sector has been rather slow to exploit the potential of technological innovation... it has been considered as not very innovative,” he added, with venture capital investment in the food sector’s start-ups just 10% of what was invested in health start-ups over the last ten years. Still, he noted, the situation is changing, with private investors increasingly getting involved.



(Clockwise) **Simon Pickard**, Network Director, Science | Business (Moderator), **Benoit Buntinx**, Director of Business Creation, EIT Food, **Hubert Cottogni**, Director & Head of Mandate Management, EIF, **Magdalena Kozłowska**, CEO, NapiFeryn, **Michael Kleindl**, Co-Founder & Managing Partner, Blue Horizon Ventures

Of course, public funds have long been of vital importance for farming. As **Hubert Cottogni**, Director & Head of Mandate Management at the EIF noted, grants have long been the instrument of choice, particularly when it comes to maintaining the rural landscape and biodiversity. However, “when it comes to marketable activities and investments, financial instruments will play a role,” he said, with the EIF currently working with the European Commission to innovate the architecture for financial instruments which can be combined with public funds.

Those can be invested in disruptive innovation which improves the food system, such as shortening supply chains. “With our equity instruments [we want to] develop an agri-food ecosystem which, for the time being, is only in its very early stage.” It’s not just about financial return, but also “how we measure impact, how we create a narrative around this impact,” he added. The EIF has invested in over 20 agri-food funds over the last three years, and is keen to build a whole venture capital universe around this sector.

That means more players like Blue Horizon Ventures. Since they were founded in 2018, the investment landscape has already changed, said co-founder **Michael Kleindl**. “The number of potential investments is growing quarter by quarter,” he said, adding that the fund recently had a close with 90% coming from private investors: “corporate, family offices, even institutional investors, which I think gives us all a flavour of the appetite the private sector has for embarking on the journey of investing in innovation in food and agritech.”

Kleindl added that he sees “great innovation” in Europe, with more and more entrepreneurs going on a journey to build a company with a true purpose. When it comes to investing, he looks at “financial performance first,” because that’s what drives impact at scale, but also takes a good look at impact KPIs, with due diligence on sustainability and similar criteria. “Societal impact in our case is crystal clear: [everything] that we touch is no plastic, no animals, no food waste,” he said. “We are trying to feed mankind with one planet and not three.”

What does this investment look like to the recipients? Poland’s NapiFeryn has got funding through the Horizon2020 SME instrument phase two and is a member of the EIT Food [RisingFoodStars Association](#), and has used its support for conducting “very demanding” R&D activities, according to CEO **Magdalena Kozłowska**. “We want to bring a disruptive solution to the industry because proteins will become the most valuable product of rapeseed and oil will have to step down to second place,” she explained. “We face a challenge of how to finance... the first factory that will be producing rapeseed proteins.”

She adds that it’s great that private investors want to support this kind of project, even with higher risk, because of the societal impact. The pandemic has made us realise that we need more resilient food supply chains, and NapiFeryn’s technology does just that. “We want to convert the waste into food grade proteins instead of first the waste being fed to animals and then animals converting this feed to food grade proteins.”

Two themes emerged in the discussion: Europe’s performance relative to other global regions, and the increased sense of urgency to invest in innovation after the pandemic. On the first point, Blue Horizon’s Kleindl noted the EU’s reliance on farm subsidies, which “probably aren’t the right mechanism,” to fix current issues. In addition, the regulatory environment needs to encourage innovation. The Singapore Food Agency recently approved the sale of cell-cultured chicken, making the country the first in the world to give its go-ahead to selling meat created in a lab, ahead of Europe, he noted.

NapiFeryn’s Kozłowska also pointed out the benefits of different investment models. “When we think about commercialisation of our technology... it’s a very money-intensive project,” she said. Looking at Canada, she said, competing companies are bringing comparable technologies to market and “we see that the pattern followed over there is the combination of many different stakeholders around one project.” Government support, VCs, and corporate support from different parties will be behind the rollout and “that’s actually what we also think would be best for the commercialisation of our technology in Europe,” she added.

In terms of timing, Blue Horizon's Kleindl noted that the time is right for more environmentally-conscious investment, with macro events such as Greta Thunberg, COVID-19 and climate change pushing sustainability up in the priority list for society. "We really do see a shift in global capital... and this is only accelerating." EIT Food's Buntinx noted that investments in alternative proteins, such as algae, insect or plant-based products and cultivated meat didn't really suffer from the crisis: in fact, "we saw a lot of deals taking place in the first three quarters of 2020," he said.

However, this doesn't mean the pandemic wasn't tough for entrepreneurs. [EIT Food's COVID-19 Bridge Fund](#) invested €5.4 million in 13 high-impact agrifood startups to help them adapt to COVID-19 and bridge the gap towards their next investment round, "to keep them alive, basically," and keep R&D running, Buntinx stressed. When it comes to investment, it's harder to build trust over videoconference. NapiFeryn's Kozłowska, received support from the Bridge fund. "Attempts to attract income were slowed down," she said, without in-person visits to a "beautiful lab" and "excellent team." However, she is "very optimistic" for 2021.

Cottogni of the EIF concluded on an optimistic note. "We will see more public funding coming into the sector," he said. The issue, he said, is whether public investors are experienced enough to attract private investment alongside, and whether this investment can stay market-oriented. "The money will be there," he said. "The question is how we deploy it"

## Investing in entrepreneurial education

The morning's final session was a high-level conversation on "Investing in the Future of Entrepreneurial Education to Boost Europe's Food Innovation Capacity." Vesa Taatila, President and Rector of Finland's [Turku University of Applied Science](#) and Georgi Dimitrov, Deputy Head of Unit in Innovation and EIT at [DG Education, Youth, Sport and Culture in the European Commission](#) discussed what the continent can do to drive innovation through education.

Moderator **Paul Adamson** noted that the idea that Europe isn't inherently entrepreneurial seems to be changing, and discussed with the speakers how the EU can integrate a can-do mindset in its students throughout their education. "We broke the ice with the Erasmus program some 30 years ago," **Georgi Dimitrov** said. "Now we are moving into the transformation agenda for higher education which we are going to present next year."

Three big drivers have come to an inflection point now, he noted. The European Green deal is a massive transformation of policy, the digital transformation is making people think

about fundamental change in an integrated way, and the pandemic has shown just how necessary societal change is.

"As painful and as tough as it is," right now, he added, students, teachers and citizens need to rebuild systems stronger and better. Education is a national responsibility, but there are plenty of tools at an EU level to help people reskill and upskill. He also outlined the Commission's proposal for the next stage of EIT, including more support for the entrepreneurial capacity of higher education institutions.

But is it not just about equipping students with innovation and entrepreneurship skills. The way we learn needs to evolve as well, noted Turku University's **Vesa Taatila**. The lecture was an excellent innovation about 1000 years ago, he added, when monks had to pass information to each other with quill pens and parchment. But "it's not an effective way to learn any more," he said. Higher education leaders now need to think about "what are the skills required from our graduates in the future," including entrepreneurial skills.

While student interest in entrepreneurship has remained steady for around 15 years, he said, there's a new demand from wider society for graduates to have these skills. "At the same time society started developing into the idea that they need more entrepreneurs... and more highly educated people choosing the entrepreneurial route," he said. That's also a shift in the type of work involved. It used to be a question of opening a shop, or starting a small company. "Now it's more about AI, IoT types of jobs which require very deep knowledge of the content of the business."



(Clockwise) **Georgi Dimitrov**, Deputy Head of Unit in Innovation and EIT at DG Education, Youth, Sport and Culture in the European Commission, **Vesa Taatila**, President and Rector of Finland's Turku University of Applied Science and **Paul Adamson**, Chairman, Forum Europe (Moderator)

Finally, it means a change in culture. Entrepreneurship isn't so much a course to be studied as a "holistic approach," he said. Universities have to work out how to help students create this entrepreneurial attitude through their studies." This also ties in neatly with the rise of social entrepreneurs.

The “advantage of the European approach is that you don’t only aim for the money,” he said. “Putting that agenda to our students, who are very green-oriented nowadays,” really gets them interested.

## A stronger innovation ecosystem to scale-up faster

EIT Food CEO **Andy Zynga** returned to summarise the day’s proceedings and close the conference. “This gave us all an opportunity to see how our food system is closely interlinked with our financial and fiscal system,” as well as health and education, and “ultimately with global governance and democracy per se,” he said. The UN system shows that governments, civil society and companies all have a role to play in the coming, vital years, with the clock ticking to change the way we live, work and eat.

“Improving the food system requires consensus and the ability to make tough choices,” about how we use resources and invest money, Zynga said. The EIT will continue to develop a framework for innovation at system level; food and drink remains a highly fragmented sector, with 285,000 SMEs active in the food sector in Europe. With such a complex value chain, there is a need to scale up innovation – right now. “The greater our ecosystem, the higher the number of collaboration opportunities,” he said. “And the more diverse and unprecedented the nature of this collaboration, the faster this transformation will take place,” he concluded.

## Day 2 | Breakout Session One

How has COVID-19 affected food production and consumption patterns? What are the new market trends shaping the agri-food sector and what innovative solutions is the industry adopting to improve its sustainability and resilience?

Globally, 2020 wasn't the year anyone was expecting, with much of the world experiencing lockdowns, travel bans and disrupted supply chains due to the spread of COVID-19. How has this affected food production and consumption patterns? In early December, a consortium of EIT Food partners published a new report on the [impact of the pandemic on consumer food behaviours](#).<sup>3</sup> Earlier in 2020, EIT Food partnered with Deloitte and Lantern to conduct a [Food Foresight Analysis](#) on the impact of the pandemic on the agri-food sector in Central Eastern Europe and Southern Europe. The consumer study's director and the leads of the Foresight Analysis joined a panel bringing together economics, packaging and supply chain expertise to discuss new market trends shaping the agri-food sector, innovative industry solutions and how different regions across Europe were affected. Key takeaways below:

- **Sustainability trends were emerging before the pandemic.** The global health crisis has disrupted our daily lives, explained **Klaus G. Grunert**, Professor of Marketing at Denmark's [Aarhus University](#), who led the consumer behaviour research. "It has had a direct impact on actors in the food supply chain," he said "and has an impact on the way consumers relate to food." It has reinforced trends that were already ongoing, such as an interest in health, sustainability and carbon emissions. "There is a chance that these changes will persist out of the pandemic and therefore contribute to the green transition," he added.

### Speakers:

**Moderator: Marja-Liisa Meurice**, Director, EIT Food North East

**Gonzalo Campos**, Fish and Convenience Meals Marketing Manager EMEA, Sealed Air

**Klaus G. Grunert**, Professor of Marketing Aarhus University; Founder & Director of the MAPP Research Centre

**Julia Patorska**, Partner Associate, Deloitte

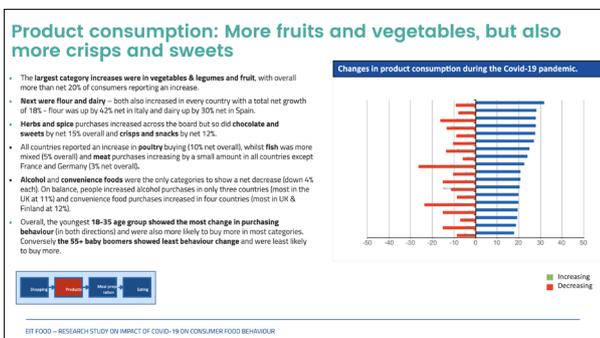
**Begoña Pérez Villarreal**, Director, EIT Food South

### The Future of Food Conference 2020



(Clockwise from left) **Marja-Liisa Meurice**, Director, EIT Food North East (Moderator), **Julia Patorska**, Partner Associate, Deloitte, **Klaus G. Grunert**, Professor of Marketing Aarhus University; Founder & Director of the MAPP Research Centre, **Gonzalo Campos**, Fish and Convenience Meals Marketing Manager EMEA, Sealed Air, **Begoña Pérez Villarreal**, Director, EIT Food South

- **The research shows consumer behaviour changed, but not uniformly.** The study surveyed 5,000 consumers in ten European countries (Spain, Sweden, Germany, UK, Poland, Italy, France, Greece, Finland, and Romania) and showed substantial shifts in shopping patterns, meal preparation and eating habits. There was more bulk buying, more online shopping and more deliberation over products purchased. A remarkable 45% of people have been doing more online shopping, and young people were more likely to change their behaviour than their older peers.
- **Wider economic changes affect food choices.** Across Europe, the pandemic has created new groups of consumers. Many are looking for low prices because they have lost part or all of their income due to the economic situation, while others whose income streams haven't been disrupted are spending more as they seek out healthier choices.
- **Dinnertime!** "The role of meals in the family" has increased, Grunert said. "People take more time in the kitchen, take more time cooking, enjoy experimenting with new recipes, and they do more meals together with their family." That's reflected in a big increase in flour sales, probably because people are baking more. The biggest increase by category is fruit and vegetables, "which you normally take as an indicator of a healthy lifestyle." However, the next two are crisps, chocolate and sweets "which are more indulgent types of products."



Presentation by **Klaus G. Grunert**, Professor of Marketing Aarhus University; Founder & Director of the MAPP Research Centre

- **The food service sector has been hit hard.** The research revealed regional differences in where, what and how we eat. **Begoña Pérez Villarreal**, Director of [EIT Food South](#) pointed out that the hotel, restaurant and catering (Horeca) sector had been hit hard, and that between 15 and 30% of food consumption is in food service in southern Europe. "We know that remote working is still going to be a trend for much longer than the pandemic," she said. "That will lead to more meals at home, that means more home cooking as an alternative to restaurants," affecting the whole economy.

- **Size matters.** SMEs have been disproportionately affected by the crisis, because they can't rely on large scale and long supply chains for resilience. EIT Food is working on a testbed for SMEs and digitalisation in Europe, as well as a new call for sustainable aquaculture projects to support the sector. Most importantly, producers, retailers and stakeholders of every size have been working to keep Europe fed during the crisis.
- **Overall, agri-food has been remarkably stable throughout.** "The key word... is resilience," said economist **Julia Patorska**, a Partner Associate at [Deloitte](#). "The agri-food sector has been relatively more resilient than other sectors in terms of both demand and supply." This significant difference with the non-food sector comes down to a fundamental truth: "People can put off other purchases, but they have to eat."
- **But underwent structural changes.** Faced with huge disruption as countries locked down, supply chains were disrupted and social distancing was put in place in factories and warehouses, the industry has come up with a range of novel solutions. These include farmers selling directly to the public, a bigger online offer, and rerouting food that would have normally gone to Horeca customers directly to the public. Much of this innovation has been linked to the use of digital platforms.
- **Purchasing habits are shifting.** The research showed that consumers' buying patterns changed during the pandemic. Campos said he had seen changes too: people started buying bigger packs of fish products, switching from 200-300g to 650g family packs, for example. "Frozen was boosted amazingly. It was stable, now it's completely alive," he said. "Everyone was looking to protect their health and fish was really appreciated by society."
- **Innovations in food and packaging.** "In the first months of the first wave there was no innovation, because how could there be innovation when nobody really knew what was going to happen?" said **Gonzalo Campos**, Fish and Convenience Meals Marketing Manager for EMEA at packaging giant [Sealed Air](#). That was followed by a range of new ideas, especially for consumers looking to have indulgent meals while stuck at home.
- **Conscious choices.** "The pandemic has made us all more aware of how our health is connected to our environment and our planet and how, as consumers, we have the responsibility to make smart choices," said Deloitte's Patorska. People are more interested than ever in local produce, sustainability and plant-based proteins. It applies to packaging, too. "Customers were already migrating towards more sustainable, designed for

recycling, solutions,” said Sealed Air’s Campos: that trend is accelerating.

- **Track and trace: not just for people.** This new emphasis on health and sustainability means growing interest in information streams, blockchain verification, and origin data, and that’s a good thing. “Solid consumer understanding is a base for innovation,” concluded Grunert.
- **Innovation should happen fast.** The aftermath of the pandemic “is really disruptive, but at the same time there are great opportunities,” said moderator **Marja-Liisa Meurice**, Director of [EIT Food North East](#). “We need to catch them and go really fast ahead with innovation.”

3 The project ‘How the COVID-19 crisis affects consumer behaviour and consumer demand for food products and services’ was coordinated by Aarhus University and included project partners Queens University Belfast, University of Helsinki, KU Leuven, University of Warsaw, VTT Technical Research Centre of Finland and Spanish National Research Council (CSCI).

## Day Two | Breakout Session Two

### Towards the 2021 UN Food System Summit: Do we have a global agenda for agri-food R&I and investment to reach SDG2?

The UN Food Systems Summit will take place throughout 2021, and will launch bold new actions worldwide to deliver progress on all [17 Sustainable Development Goals \(SDGs\)](#), each of which depends on the creation of healthier, more sustainable and equitable food systems.

The Summit will awaken the world to the fact that we must all work together to transform the way the world produces, consumes and thinks about food, so this panel brought together experts from the highest level to discuss how global R&I and investment priorities can be set to meet the Summit's objectives. They tackled the role of public and private actors, building hubs and ecosystems, and how to measure their impact on achieving development targets.

COVID-19 has exacerbated the difficulties and disparities within the international community in its fight to end global hunger. Much of the world's land is inefficiently farmed in a way that harms the environment. Food waste continues to be a huge issue and climate change isn't going away. How can a global agenda tackle these burning issues? Key insights from the panel:

- **The situation is unacceptable.** Globally, 690 million people are undernourished, and it's getting worse. "Income inequality is rising in nearly half the countries of the world, including in several low-income countries and some middle-income," said **Máximo Torero Cullen**, Chief Economist, [Food and Agriculture Organization of the United Nations \(FAO\)](#). "This increase in inequality is something that will continue and will even be exacerbated even more in the case of COVID-19," he said. If these levels of inequality continue, we won't be able to achieve SDG1 (No poverty) and SDG2 (zero hunger) in a sustainable way.

#### Speakers:

**Moderator: Uzoamaka Madu**, Strategic Communications, What's in it for Africa

**Saswati Bora**, Head of Food Systems Innovation, World Economic Forum (WEF)

**Máximo Torero Cullen**, Chief Economist, Food and Agriculture Organization of the United Nations (FAO)

**Sean Westcott**, Senior Vice President, R&D Europe at PepsiCo

**Andy Zynga**, CEO, EIT Food

#### The Future of Food Conference 2020



(Clockwise from left) **Uzoamaka Madu**, Strategic Communications, What's in it for Africa (Moderator), **Andy Zynga**, CEO, EIT Food, **Saswati Bora**, Head of Food Systems Innovation, WEF, **Sean Westcott**, Senior Vice President, R&D Europe at PepsiCo, **Máximo Torero Cullen**, Chief Economist, FAO

- **A total transformation is needed.** “It’s clear that we really require fundamental change in the way our food is produced,” said **Saswati Bora**, Head of Food Systems Innovation at the [World Economic Forum](#). Food systems need to be sustainable, nutritious and healthy. “What we need is an integrated systems approach... that creates positive, tangible benefits for people and planet,” she said.

- **Recovery plans need multiple approaches to work.** That means a range of interrelated actions, including social protection mechanisms to support access to food for the poor, properly aligned incentives (with the right kind of subsidies going to the right place), intelligent use of technology and the use of trade to boost farmers’ productivity and income, Torero said.

- **Europe is a global sustainability leader.** Food and beverage companies have spent a lot of time looking at the EU Green Deal, and it changes everything, said **Sean Westcott**, Senior Vice-President of Research & Development for Europe at [PepsiCo](#). “It’s a different landscape,” he explained. “There are things that will help us to drive our business forward, but there’s also challenges.” What that does is to promote innovation, by showing the entire sector they have to think differently about how we grow and make food. “That’s what really spurs innovation,” he said, adding that his US colleagues are keeping a close eye on what’s happening in Europe, which is seen as the “leading edge” of sustainability and nutrition, because of the way these issues are brought together at regulatory and industry level.

- **Coalitions, hubs and platforms.** The challenges are well defined, said [EIT Food](#) CEO **Andy Zynga**. But overcoming issues such as food waste, hunger, obesity and climate change requires all players to join the dots, including universities, governments, farmers, producers and consumers. “Local players have to come together as one great coalition and set up hubs,” he said. “Hubs really work in the platform business model.” He posited the idea of the FAO as a hub of hubs.

- **But one size does not fit all.** Everything is a compromise: working out the global priorities for how to end hunger requires farmers and businesses to make different trade-offs in different places. For example, water use is more of an issue in areas at risk of desertification; in other areas biodiversity is what needs attention. The point of a systems approach is trying to balance these compromises, the FAO’s Torero noted. “We need to understand where we need to put the data, the innovation, the technology,” he said. “For that, data is central... we need modelling to measure those trade-offs.”

- **Data will change everything.** PepsiCo’s Westcott shared the example of iCrop, a tool the company developed with Cambridge University in use on around 48000 hectares across 16 markets growing potatoes. It measures millions of data points from fields, including crop performance, weather, soil type and irrigation. This data is put together through a mobile web platform and sends information to farmers who can use and apply it directly, improving use of resources such as water.

- **But data needs connectivity.** The FAO’s Torero stressed the importance of investing in every type of communication, from road infrastructure, which helps get food to markets, to reducing the digital gap and connecting unconnected people. The funding gap to do this is USD 125 to 2100 billion, he estimates. Collecting, structuring and sharing data is the single biggest factor in effecting change, PepsiCo’s Westcott added. “How do we share that data effectively and put them in the hands of farmers to their benefit?” he asked.



Presentation by **Máximo Torero Cullen**, Chief Economist, FAO

- **Education, at every level.** EIT Food’s Zynga noted the difficulty farmers have in finding people who are willing to take on tough agricultural work in outdoor conditions, but also have a strong data science background. PepsiCo’s Westcott stressed the value of their partnerships with European universities, noting that the sector could use Europe to model how to solve these challenges for the world.

- **Solve the investment paradox.** 20% of global GDP is generated in food systems but only 6% of VC funds go there, said Zynga. EIT Food operates six accelerators across Europe and Israel, and gets a lot of interest from family offices interested in “impact investing,” he said. That needs a functioning ecosystem of start-ups, larger players and impact goals aligned with society as a whole.

- **Innovative finance can help with this** noted the WEF’s Bora, citing solutions like green bonds, plug-in finance for emerging economies, and infrastructure funds. Torero from the FAO noted that “one of the main issues with

the private sector isn't that they don't want to invest in a location, it's just that they don't have the information." Innovative mechanisms, additional de-risking tools or other tools could help with that.

- **Cash is (still) king in critical situations.** Just giving money to smallholder farmers in difficulty is still the most effective way to help them. Globally we need to scale up the rate of cash transfers relative to pre-pandemic levels: the [FAO's cash-based programmes](#) support smallholder farmers and other vulnerable men and women, who are particularly exposed to the impacts of climate change, natural hazards, economic shocks, conflict and protracted crises.
- **Waste less for quick wins.** Reducing food waste will help fix a lot of the problems upstream. "We need to move fast and act because it's a triple win that we cannot miss," said the FAO's Torero. That means improving supply chains, especially in developing countries, which will reduce emissions and reduce losses close to farm level.
- **Don't let the crisis go to waste.** "What we saw with COVID-19 was quite clear, it was disruption of local supply chains that was the problem," said Bora from the WEF. She sees a lot of good solutions that are not currently scalable because the food and agriculture sector is so complicated and fragmented. The crisis will leave 130 million more people undernourished, warned the FAO's Torero, so we need to "build back better, so that we are more resilient."
- **Think global, act local.** The tough part is deciding what the priorities are at a global level because they can be so different from local to regional to global, said Moderator **Uzoamaka Madu** from strategic communications agency [What's in it for Africa?](#) "We need to consider the trade-offs, such as the cost of food versus sustainable production of it." That gives the 2021 summit plenty to think about!

