Consumer Compass

2021

Consumer Compass 2021

Content

About us

The new global leader in fresh produce, Dole plc was born in 2021 – the product of the combination of Dole Food Company and Total Produce plc, two complementary, synergistic and culturally aligned industry leaders each with more than 150 years of history in the fresh produce sector.

Dole plc is distinguished by its operational reach and resources. Extending from seed to store, we bring best practices and efficiencies to the supply chain through investment in the resources required to make a difference to both our produce and the services we provide. Operational, commercial and environmental dividends are shared by growers, customers and consumers alike.

Local at heart, global by nature, we are structured to optimise focus and direct resources towards key products and categories and customise services for local customers and markets. In that spirit, our Northern European business unit conducted this report – the Consumer Compass 2021, in cooperation with Kairos Future. Our vision is to make the world a healthier place – to get there, it is crucial to understand the end consumer. What are the drivers and barriers behind the consumption of fruit and vegetables? What makes people crave for our products? How do we reach out to those who are sceptical? How do we engage those who have not yet discovered the joy and feast of flavours associated with adding more fresh produce to their plates? The Consumer Compass has the answers.

Executive summary

Fresh produce is the most complex and fast moving category for grocery retailers. Despite the challenge, the fruit and vegetables industry has managed to handle recent challenges, such as the pandemic, strikingly well. To continue to thrive in an ever more competitive retail landscape, it is time take ambitions to the next level to better understand and address the needs and desires of consumers. In this year's fruit and vegetable report we have considered eleven countries, mostly in the Northern parts of Europe. The most important learnings from the study that we believe can help drive the success of the industry and better serve consumers are the following:

Berries – the Trojan horse

Our study shows that berries are enjoyed among all consumer groups, uniting consumer segments with positive associations. Vegetables mostly attract people who also like fruit and vice versa. Can the industry make the humble berry its trojan horse, bringing even the most sceptical consumers into the fruit and vegetable movement?

Vegetables – the real signature ingredient

Master chefs and foodies alike are embracing the spirit of vegetables. That's where the challenge is, and where a chef can really make a difference. Protein and carbs are just garnish. It is, increasingly so, the vegetables that set the character of the meal and that are worth highlighting – on the menu, on Instagram, or among friends.

So, you like apples? Have a carrot!

There is a somewhat mind-blowing insight, that there are taste-matching preferences at play that can influence you as a consumer towards a preference for either the tomato and banana cluster or for the apple and carrot cluster. Think how we can simplify offers and make sure people get what they want and like, giving recommendations to consumers based on these preferences.

It’s time for fruit to get up on stage and perform

Fruit is at risk of being lost and forgotten in today’s competitive food landscape. The industry and the worlds’ fruit and veg departments need to find a way for fruit to play more and bigger roles at different meal occasions – not just breakfast, lunch & dinner. Snacks and light-meal culture vary a lot between markets. But they have one thing in common: fruit is losing ground to unhealthy processed snacks. The potential is huge for the industry and for customers to find new roles for fruit to play.

It won’t sell itself

The industry needs to be better at strategic work. New models for logistics will change how we look at perishables. We cannot rely on everybody else to make fresh produce a natural part of the future. We know that convenience is key and that consumers will accept and expect a new take on low-price and premium. Simply put, the industry needs to be more strategic when creating new consumer experiences.

One size doesn’t fit all

While the media tends to focus on health and sustainability-driven consumers, there are other large consumer segments whose priorities lie elsewhere. They have different consumption drivers ranging from shame to showing off. We need to address them all, as one story doesn’t fit all.

Put sustainability on the plate

There are vast differences in views and priorities between consumers, influencers, experts, and the industry when it comes to the perception of what it means to be sustainable regarding fruit and vegetables. For example, experts point to water-use as the most important issue, but consumers prioritise locally grown. For sustainability to be a bigger more vibrant part of the industry and the Fruit & Veg revolution, we all need to understand each other better.

Free will in food choice? Think again!

When choosing food, we decide much less for ourselves than we might think. There is a constant struggle between free will and inherited culture, between our values and our automatic responses. Especially in traditionally “meat-based” cultures, where it’s clear that it will take more than a vegetarian and vegan wave to change centuries of ancestral inheritance. Our inherited food culture often comes out on top, however conscious we think our food choices are.

Chapter 1

Introduction: the big picture

Introduction: the big picture

While many industries have been challenged by the turbulence of the pandemic, the fruit and vegetable industry has managed to handle the difficulties strikingly well. Despite dealing with perishables, where a day of waiting can create high levels of waste, most European countries and consumers have seen little change in the food supply. During the autumn of 2021 the shortage of transportation capacity had a visible impact, but in general stock shortages were surprisingly few and far between. Instead it was toilet paper and puzzles that were missing from the empty shelves.

One reason for this is probably the extraordinarily time-critical and ever changing nature of the fresh produce industry. According to Stephan Bruhn at Salling Group, it is the most complex and challenging category for a grocery retailer. There is a constant challenge to find the right product that is ready to deliver to consumers since weather, disease, and global demand can shift rapidly. This has created an inherent agility that most other business sectors could only dream of, in a world where “agile” is one of the most sought-after characteristics of leadership.

On the other hand, there is a flip-side to the focus on rapid change. It has also led to short-termism. A strategic mindset and future orientation have been de-prioritised. This report and related work in the area is done with an ambition to contribute to making the fruit and vegetable industry more strategic and able to provide more effectively for the future demands of consumers and society in general. If we are going to make the most of our important role in people’s lives and in our work towards a sustainable planet, the industry has to step up and understand consumers, society, and our potential role more deeply. We have to analyse the trends, the drivers, the actors and ecosystem in both business and the environment and find good partners for change.

With this purpose in mind the project was started in Sweden four years ago and has now expanded to an international context covering 11 countries in Europe, involving experts and secondary research, workshops and a major quantitative study.

While the report is fairly serious, we must also be aware that having an impact on a broader scale requires messages and initiatives beyond mere information. The most important work to be done is in engaging people with lower levels of consumption, a fair share of whom do not have health and sustainability as their main focus when buying or eating food.

“The higher educated are more respondent to messages of diets and sustainability.”
Emely de Vet, professor of food and healthy living

Creativity, persistence, and testing are also important ingredients in our mission to stimulate a healthier lifestyle with more fruit and vegetables.

1.1. Shifting social and consumption trends

Society is going through more fundamental shifts than we have seen in many years. The two most common descriptions of the contemporary social context are perhaps Uncertainty and Complexity. This could be interpreted as if it were almost impossible to say anything concrete about the future. At worst it is interpreted as if nothing can be done to make a better future.

We don't agree with either of these. It is still possible and valuable to understand what is most likely to happen in the future and it is definitely possible to make things better. Making the world eat better food and live a healthier life in general is one of these things to which one can contribute.

Uncertainty and complexity is real

Yet people's perception of uncertainty and complexity is at the same time very real, and it has an impact on how we prioritise as consumers, family members, employees, citizens, and more. The two main areas of change that create this uncertainty are shifting megatrends and challenging of existing institutions. Since megatrends and institutions normally change slowly, we tend to perceive them as very stable. If a new colour is in fashion during spring, we find it interesting. But if individualism is changing to prioritise group loyalty, one of our most fundamental assumptions of how the world works is suddenly challenged.

Megatrends are shifting

Urbanisation

Urbanisation is not a given development. During the pandemic a couple of megatrends that used to be taken for granted, such as the increasing dominance of megacities as the population swells to over 10 billion, have been challenged more clearly. Already before the pandemic the growth of the largest cities had started to slow. More importantly the attractiveness of living with access to urban life but from a greater distance was observed before the pandemic, a development which has only increased since.

Individualisation

Individualisation, one of the most talked about trends of our time, is being reversed. People tend to value individual choice less and prioritise group loyalty more. One of the best examples is Pew Research Center's mapping of opinions among people from the USA related to their political preferences. While people voting for the Democrats used to think like Republicans in most areas in 1994 and 2004, this had changed quite dramatically by 2014. Opinions in 2014 were much more oriented towards what was expected from the group i.e. political orientation. Loyalty is now more important than making your own judgement. This development seems to be prevalent in most parts of the world where loyalty to a group – even down to what to eat or how to prioritise and relate to personal health and well-being. The use of face masks and vaccine uptake has for example been a way to show loyalty to a group.

Decentralisation

In John Naisbitts seminal book Megatrends, from 1980, one of the ten trends is “From centralisation to decentralisation”. Now the opposite is true in many parts of the world. This is reinforced by the increasing amount of data collected at all levels of society, i.e. among individuals, among states, and employers. With ever more information, predictions and optimisation of things like consumer demand, stock levels, fertiliser, weather, cold chains and sourcing can be significantly improved. This gives the intentional and unintentional ability of gaining control over new areas. Sellers have better control over their consumers, people have better control over their health.

Institutions are challenged

Both formal and informal institutions are being challenged. Central banks are challenged for their printing of money, cooperation across countries is challenged, as seen in the EU (through Brexit), the UN and ICC (International Criminal Court). Justice systems and constitutions of countries are challenged and brought into question. Even democracy and freedom are being challenged in many parts of the world. 2021 is “the 15th consecutive year of decline in global freedom” according to Freedom house.

Comfort and control

The opportunity to use data to optimise production, cold chains, storage, etc. provides an opportunity for the fruit and vegetable industry, as well as for other industries and consumers. It also brings a feeling of control and comfort. The pandemic has put an extra level of uncertainty and risk on society. In a society characterised by uncertainty and complexity, consumers and organisations have a natural desire for safety, comfort, and control. Food and eating habits are an essential part of this. Centralisation is therefore driven both out of the opportunity to improve actions based on centralised data, but also from the increased uncertainty and desire for control, as well as the feeling of safety and comfort offered in this way.

1.2 11 countries: a broader outlook

Figure 1. *Overrepresented words in each country in replies to the survey question 'What is your favourite thing to eat?'. Responses were machine-translated to English before overrepresentation was calculated.*

This report on fruit and vegetable consumption has a broader geographic scope than those that have come before, and now looks at eleven countries in northern and central Europe. While most of the trends and attitudes related to fruit and vegetables and food in general are similar, the countries have partly different and to some extent contrasting food cultures, both historically and today.

This can, for example, be seen in meat having notably different positions of importance in consumers' minds – something we look at in Section 2.2, and which can be of relevance for whoever wants to nudge chefs and diners towards increasing the share of vegetables in their meals.

Figure 1 visualises each country's overrepresented responses to the survey's open question 'What is your favourite thing to eat?', which was asked before respondents knew the survey's focal topic. It was intentionally left open to interpretation, in order to get a sense of what eatables are top of mind where. The result can be read as a 'food culture map', reflecting heritage from past empires and migration waves, with Indonesian dishes frequently mentioned in the Netherlands, North-African food in France, and the Döner popularised by Turkish immigrants in Germany. Timeless national signature dishes also stand out in the map, including Schnitzel in Austria and Dumplings in Slovakia. Tacos are arguably a modern-day national signature dish of Sweden. Fast food such as chips and hamburgers, on the other hand, are popular everywhere and therefore do not stand out much on the map. Pizza is perhaps an exception – popular everywhere but still more prevalent in Germany and Austria.

Certain food ingredients are also overrepresented in responses from certain countries, including fish (Finland), meat (Czech Republic), cheese (Slovakia), and – of most interest for this study – fruit in the Czech Republic and especially in Poland. This, of course, makes Poland our favourite country, since people there are so fond of fruit, as you can see in Figure 1. Poland stands out with 25% of respondents mentioning either a fruit, berry vegetable, or a vegetable-based dish as their favourite thing to eat, compared with 16% doing so on average across the eleven countries.
In general, Poland stands out as eating more fruit, both during the pandemic and in general. Poles are also lovers of berries and miss them most when not available, and want to eat more of them.

1.3 Key differences within, rather than between countries

While we do see greens featuring to varying degrees as people's favourite things to eat in different countries, the two key dividers when it comes to how much fruit and vegetables respondents say they eat go along age and gender lines rather than between nations:

- **The younger you are, the less fruit you eat**. Age is more strongly correlated to fruit consumption levels than any other demographic variable. (Note that the youngest survey respondents were 18, so children are not included in our data.)
- Vegetable consumption, in contrast, is more strongly correlated to gender, with **women eating significantly more vegetables than men do**.

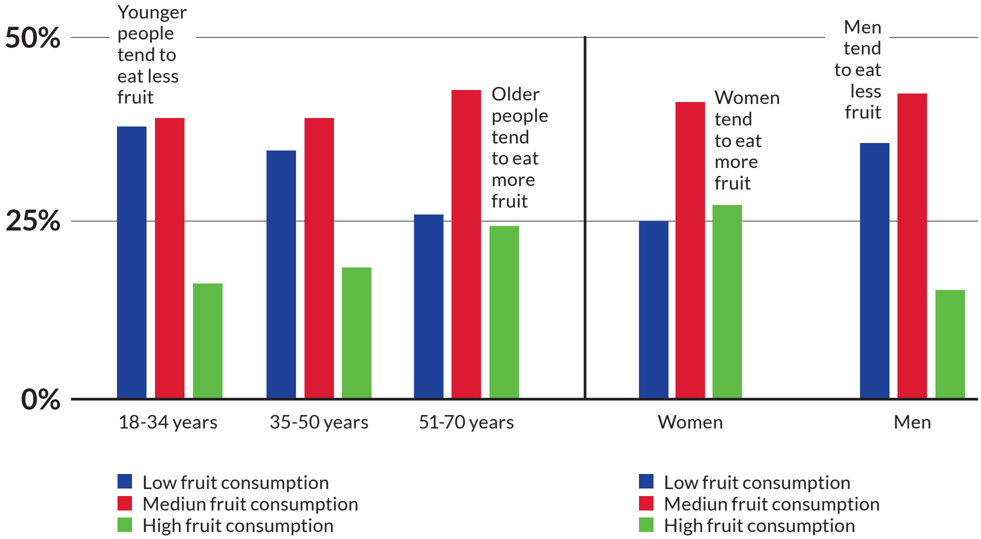


Figure 2. *Age and gender gaps in consumption levels of fruit (excluding berries) and vegetables.*

There is a gender aspect to fruit consumption as well, with older women having the highest fruit consumption of all respondents. Among older men, there is a clear division between those living with a partner – who are likely to be, in most cases, an older woman – and those who don't. Older men with a partner eat a lot of fruit, while those who live alone eat considerably less.

Berry consumption follows different logic, and does vary more clearly between countries than between demographic profiles. This is one of several aspects in which berry consumption is different than that of fruit and vegetables – more on that in Section 2.1!

1.4 The pandemic has been an important context

This study has had different conditions than those that have come before, not only because its broader geographic scope, but also because it has been conducted during a global pandemic that has changed everyday lives for people around the globe.

Who suffered during the pandemic?

Not everyone has been faring worse than normal during the COVID-19 pandemic. By analysing the responses to a set of questions about life during the pandemic, we see one segment of people whose eating habits have improved, who have been exercising more, and who have been indulging in more good and expensive food at home than they normally would have. To a large extent, those are the same people who have been working more from home; they are well-educated, urban, and have high incomes. These kinds of experiences have been more common in the Nordic countries and in the Netherlands compared to elsewhere. People with low income and shorter educations, on the contrary, tend to live in households that have had to make big sacrifices, with an economic situation that has gotten worse. They are also more likely than others to say that they have gained weight during the pandemic. Respondents in eastern Europe – but also in Germany and Belgium – are more likely than others to have faced a worsening situation.

[1] Low income here refers to a monthly income below 1,500 euro or equivalent. High income refers to a monthly income above 4,000 euro or equivalent.

The online movement

Another dimension in the contrasting experiences during COVID can be seen in the differing degrees to which people have been orienting their lives towards the online world. It's been said that we fast-forwarded two years of digitalisation. At one end of the scale we see people who have been not only working, but also shopping, more online. At the other end we see consumers who have been turning to their local stores more than at other times. This might to some extent be explained by a general decrease in travelling for work as well as for other reasons, leaving the local stores as the only option for those who cannot, or don't want to, shop online. Interestingly, however, those who have been shopping more in local stores also tend to have been buying more locally produced products. This suggests that the shift towards shopping locally among this segment has not only been a practical necessity, but that their mindset has become more local in the process.

Maybe not surprisingly, people with a local orientation have been living a physically more active life than those focusing their attention on a screen. An orientation towards the local community seems to go hand in hand with physical activity; respondents who say they have been exercising more are often local-oriented. Those who say they have gained weight, in contrast, tend to be online-oriented.

1.5 Four trends experienced by consumers

We have asked respondents about any trends they have observed among their friends and four groups of answers were found.

Local AND organic

The local trend also shows up when we ask respondents to describe what food-related shifts and trends they can see among people they know. The rising popularity of local food tends to be mentioned together with an increased interest in organic food. The two seem to be associated with each other in consumers' mind – is this because both are perceived as sustainable, or because the local and the organic both feel natural and safe?
Speaking of organic, this is a topic with notable differences between countries: while 38% of respondents in Denmark and 33% in Poland find organically produced vegetables to be worth paying something extra for, only 16% of respondents in the Czech Republic and Finland feel the same. Regarding interest in local food, more thoughts on that can be found in Section 4.3.

Eating at home

An increasingly local focus is not something that respondents are explicitly connecting to the pandemic situation. Many do mention the pandemic, though. When they do, it is typically mentioned as a driver behind an increased interest in cooking, as well as in ordering ready-made food to eat at home rather than at restaurants. As this has been caused by social distancing measures, we think it is more likely than the other trends for respondents to report less of following the pandemic. Even if many people keep working from home to some extent in the coming years, and even if business travel stays lower than pre-pandemic levels (which is the general assumption), many will undoubtedly want to eat at restaurants much more than they have done during the pandemic.

Free from

Increasing popularity of food free from gluten and/or lactose and food low in carbohydrates are commonly mentioned together. When counted together, these are mentioned more commonly than any of the other themes. The free-from movement has been ongoing for many years where things like no added sugar, gluten free, and lactose free have been common, and more recently, dairy free.

Another trend that perhaps mirrors that trend is nutritional value. Perhaps this has been discussed more within the industry than among consumers. The concentration of the good should be as important as the elimination of the bad. This is an area in which Poland stands out. Almost half of the respondents there (47%) prioritise high nutritional value when asked to rank what attributes make vegetables worth paying something extra for. In that respect, Poland stands in stark contrast to the neighbouring Czech Republic, where only 19% chose this as a priority.

Reduce meat, more plant based

People are reducing their meat consumption, or going full-out vegetarian or vegan. This was also seen as a key trend in the previous Swedish fruit and vegetable report in 2019, in which we asked the same question. While there seems to be a solid trend towards vegetarian, vegan, plant based, and mainly vegetarian dishes with less meat across all countries, there is no clear sign of a reduction in meat consumption. However, the trend is observed by most people in the researched countries.

Stimulating a plant-based diet also requires being careful. Francesco Branca, director of nutrition at the WHO, gives an example where introducing more plant based food in schools in Milan was done alongside a campaign aimed at parents as well. This was important in order to get acceptance within families for the increased share of vegetables.

Chapter 2

The product landscape & *shifts*

The product landscape & shifts

Fruit, vegetables and berries play different roles for different people and their roles sometimes also change over time. In general, vegetable consumption has increased more than fruit consumption. Berries have been the real winner. How can we make the most of the increased focus on vegetables and vegetarian, and how can we make fruits part of the growth? Are berries key to making this happen?

2.1 Berries – the Trojan horse

Our study shows that berries are appreciated among all consumer groups, uniting across consumer segments with positive associations. Vegetables mostly attract people who also like fruit and vice versa. Can the industry make the humble berry its trojan horse?, bringing even the most sceptical consumers into the fruit and vegetable movement?

The 2019 report focused on fruit and vegetable consumption in Sweden, it noted that 'berries are like meat', with pleasure and flavour being more important drivers for the consumption of berries (and of meat) than of fruit and vegetables in general. Now looking at eleven countries, we still see berries as being different. Berries both attract a partly different audience than fruit and vegetables do and have functions and attributes that are similar to those of meat. As with meat, berries provide a touch of luxury and are seen as a treat for the vast majority of consumers. While meat is mainly associated with starters and main courses, berries typically have the same attributes for breakfast and dessert creations.

Combinations	Company		Creations
With fruit	With cheesecake	With family	In pie
With cake	With wine	When having guests	As smoothie
With food	With dumplings	With neighbours	As juice
With bun	With pasta	With friends	In cocktail
With tea	With waffles	In milkshake	
With coffee	With cereals/müesli	As jam	
In salad	With chocolate	As topping	
On pastries	With ice cream		
With soup	With nuts		
With pudding	With bread		
With rice	With pancakes		
With yoghurt	With dessert		
With porridge			

Eating berries while watching film or TV is most common in Czech Republic, Germany and Slovakia.

Meal	Place	Time	Season	Situation
Snack	In a garden	In the afternoon	In holiday	At a Lunch
Lunch	In the forest	In the morning	In summer	Watching TV/film
Brunch	At school	At night	In fall	Using laptop
Breakfast	On the sofa	At noon	On vacation	At gathering
Dinner	At work	In the evening	In winter	Relaxing
Dessert	In the car			When playing games
	At home			At picnic
	In a terrace			Birthday
	In resturant			At a wedding
	In bed			
	In the kitchen			

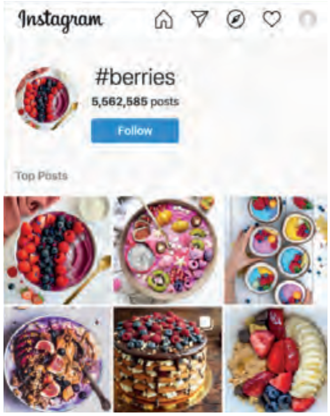
Yoghurt is mentioned most frequently in the Netherlands.

Among meals, breakfast is the most commonly mentioned in the Nordic countries, whereas dessert is mentioned more often elsewhere on the continent.

Smoothies are most common in responses from Sweden.

Figure 3. *Things mentioned in responses to the open question 'Think about the last time you ate berries. In what situation was that?' by category .*

Speaking of dessert creations, photos shared on social media give an idea of the luxurious, slightly decadent, connotations berries can give to a dish – even when there's healthy porridge on the menu. Few other plants are as social-media-friendly as berries are. (Search for #berries in your social medium of choice to get an idea!) This goes some length towards explaining a thought-provoking phenomenon which we will see in Section 3.2, namely that people who eat greens for 'showing off' – rather than for health or sustainability reasons are among those who eat more berries than others, despite having a lower than average fruit and vegetable consumption level.



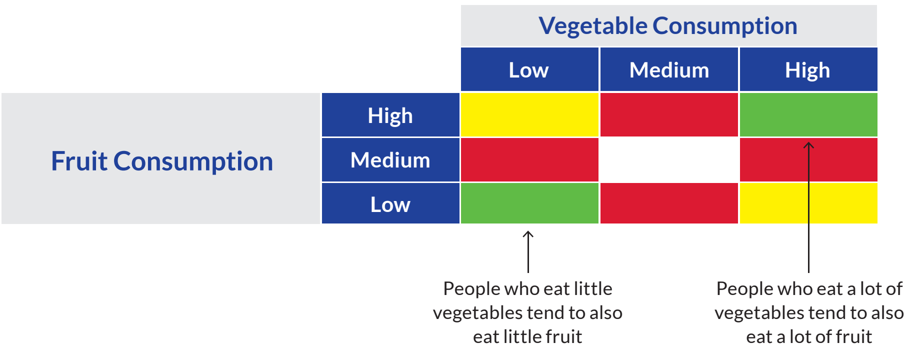
Berries are for everyone

Fruit and vegetable consumption tends to go hand in hand: people with a high fruit consumption typically have a high vegetable consumption and vice versa, and people who eat little of one of the categories tend to eat little of the other as well.

For berries, the tendencies are less clear. While there is some correlation between eating a lot of berries and eating a lot of fruit and/or vegetables, this correlation is much weaker than that between fruit consumption and vegetable consumption. In other words, many of those who eat a lot of berries are not the same people as those who eat a lot of other greens.

Berries can therefore bridge the gap between the "carnivores", the meat fans, and the "raw food vegans" vegetable front runners. In contrast to vegetables, for which inspiration and reminders can be a hurdle when encouraging people to eat more of them – as they are reminded about their bad habits – berries do not have these kind of negative associations. Berries are loved by people who eat aubergine, as well as by those who prefer pasta or chorizo.

Figure 4. *The colours in the matrix represent the degree to which respondents with different consumption levels of vegetables have different consumption levels of fruit. A darker colour of a cell indicates that a high proportion of respondents with a certain consumption of vegetables (as indicated by the column headers) fall into the fruit consumption levels of fruit indicated to the left. The key takeaway is that people who eat fewer vegetables tend to also eat less fruit and vice versa (people who eat a lot of vegetables tend to also eat a lot of fruit). These kinds of clear correlations are missing when we compare berry consumption with either vegetable or fruit consumption.*



Berries are what consumers miss the most when shopping

Three popular berries – strawberries, blueberries, and raspberries – top the list of products that respondents mention when we ask what fruit and veg they most often find to be missing when they want to buy them. This indicates that more berries would likely be sold if they were more often available at the time and place consumers desired them.

There are differences between countries regarding which fruits, berries, and vegetables consumers most often find to be missing. Poland stands out when it comes to consumers missing berries in general; they are missing blueberries, strawberries, and raspberries. Strawberries are also overrepresented as missing in Germany and Austria as well as, to a lesser extent, in Sweden and the Czech Republic.

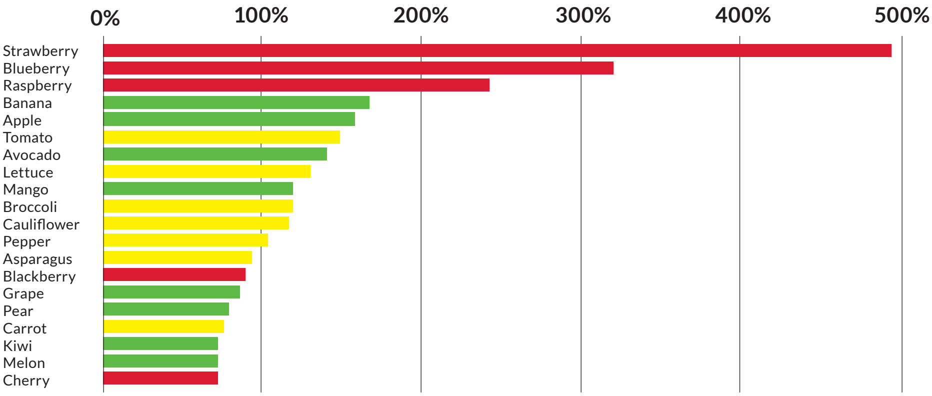


Figure 5. *The fruits, vegetables, and berries that respondents most often find to be missing when shopping.*

2.2 Vegetables – the *real* signature ingredient

Master chefs and foodies alike are embracing the spirit of vegetables. That's where the challenge is, and where a chef can really make a difference. Protein and carbs are just garnish. It is, increasingly so, the vegetables that set the character of the meal and that are worth highlighting – on the menu, on Instagram, or among friends.

Empowering vegetables as the all-important differentiator is key, rather than trying to make people eat vegetarian, especially among men, among people who lean to the right politically, and in countries where a meat-obsessed food culture prevails.

Twenty years ago sauce was the signature element of the dish for Chefs. Following this trend, we have seen an increased focus on the nature and quality of the ingredients. Now we see an extra focus on vegetables – making a good piece of meat is not the challenge. Making a 55 year old man from Mecklenburg happy with carrots as the main dish is, on the other hand, something only master chefs can do. This development could now be on the rise among households as well. It's the oven-baked aubergine, the mango salad, or the pico de gallo that sets the character of the meal, while the selection of protein and carbs are more like salt and pepper: always there, but nothing to pay much attention to. If berries are the new meat, vegetables are the new sauce, the thing that make the difference for a dish.

Vegetables were a natural choice in the Netherlands, but required an effort in the Nordics

Introducing more vegetables onto plates for broad segments of the population is more of a challenge in some countries than in others. This can, for example, be seen if we compare two countries with vastly different views on another ingredient – meat.

In both Sweden and the Netherlands, avoiding meat is relatively common. Together with Austria, these are the countries with the highest shares of vegetarians and vegans in our survey sample, as can be seen in Figure 6. However, the survey results suggest that something is fundamentally different in Swedes' and Netherlanders' relationship with meat. In Sweden, meat is the ingredient that is the decisive element of lunches and dinners. Other food plays a subordinate role to meat. Sweden is the country where the largest share of respondents (64%) tend to think about meat first when they are about to cook dish. The Netherlands, in contrast, is at the other end of the scale, with only 31% starting with meat.

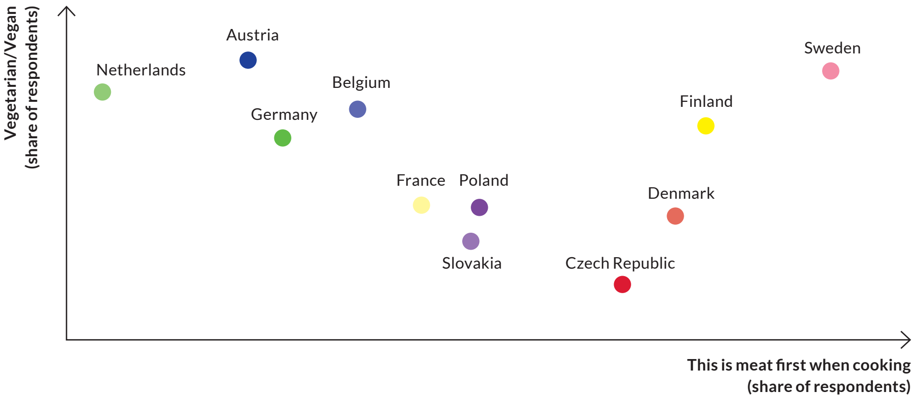


Figure 6. *Surveyed countries ordered by share of respondents who are vegetarians or vegans and share of respondents who think about meat first when cooking. Note that the proportion of vegetarians and vegans is largest in both the countries where most respondents think of meat first when cooking and in the countries with the fewest doing so.*

The meat and potato history lingers in the north

Why this difference? It is not unlikely that a place's food culture has been shaped by what ingredients have been available historically. When it comes to vegetables, availability used to vary much more between countries than it does today, with northern countries having a more limited access to fresh greens for most of the year compared to those further south. (While meat has been available, at least occasionally and to those who could afford it, outside of the harvesting season.) This would go some way towards explaining why the three Nordic countries in our survey are the countries where most respondents think about meat first. Vegetable consumption has risen a lot in the Nordics over the last half century, but traditionally rooted conceptions of what food is change more slowly. In Sweden and Finland, where food has meant meat, fish, and potatoes, putting vegetables at the centre of your dish is more of a challenge, since it requires changing food norms. Once you have crossed the mental barrier between eating meat and eating vegetables, it may seem logical to go all the way and become a vegetarian. In countries with a long tradition of eating a lot of greens, vegetarianism may either be the natural extension of a widespread pro-vegetable mindset (as in the Netherlands) or an irrelevant choice – as vegetables already have an important place in the food culture and there is no perceived contradiction between eating vegetables and eating meat.

The historic differences in different countries' relationship with vegetables can also be seen if we look at time series from the UN Food and Agriculture Organisation. France has a very favourable position when it comes to access to and a tradition of eating vegetables, with an average yearly consumption of 151 kg per person 60 years ago. The corresponding figure for Finland, at the opposite end, was only 18 kg. Today's French and Finlanders are much more similar, eating 97 and 84 kg per person per year, respectively. In general, the Nordic countries and Germany show the same upward trend as Finland, while the Central European countries and the Netherlands have had relatively high and stable figures.

Free will in food choice? Think again!

When choosing food, we decide much less for ourselves than we might think. There is a constant struggle between free will and inherited culture, between our values and our automatic responses. Especially in traditionally "meat-based" cultures, where it's clear that it will take more than a vegetarian and vegan wave to change centuries of ancestral inheritance. Our inherited food culture often comes out on top, however conscious we think our food choices are. Culture may also be used as an opportunity. It is often said that we bring home the food cultures we have experienced abroad, on holidays or on longer trips. Several experts like Cindy Rijswick, at Rabobank, mention aubergine. "Consumption of aubergine has spiked, many people have been looking at it as difficult earlier." Maybe influences from the Medeterranean kitchen have made aubergine more accessible to countries in Northern, and central Europe.

Annelies Blaauwkamer, at Love My Salad, who also mentions a rising consumption of aubergine, points out another difference they have found in the Netherlands, related to age. While the older generations tend to mention food ingredients when they think of what to eat, younger people tend to mention full dishes and international cuisines in which vegetables and meat are part of the menu. Our survey supports this finding across countries. Figures 7 and Figure 8 show overrepresented items mentioned by the youngest and oldest respondents, respectively.

As Blaauwkamer reports from the Netherlands, international cuisines (with the notable exception of Chinese food) are more typically mentioned by the younger, while the older more often mention ingredients. Apart from this, the most striking difference is the affection for fast food among the young.

Figure 7. *Overrepresented favourite things to eat among respondents aged 18-34. Based on the same data as Figure 1.*

Figure 8. *Overrepresented favourite things to eat among respondents aged 51-70. Based on the same data as Figure 1.*

Conservatives, men, and Swedes are the most obsessed with meat

As in many other respects, Sweden, despite its self-image of being exceptionally moderate, is extreme regarding how strongly its inhabitants focus on meat. This can not only be seen in how people prioritise meat when cooking. In two other survey questions, we also asked respondents how strongly they agree (1) that meat ought to be at the centre of any meal or dish and (2) that they find vegetarian food especially tasty. Combining the results of these questions with the extent to which respondents in different countries prioritise meat when cooking, we get a meat fixation ranking:

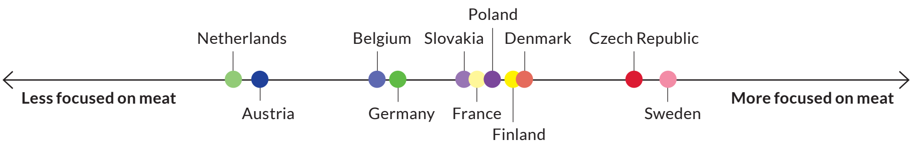


Figure 9. *Meat fixation ranking, integrating how people prioritise meat when cooking (compared to vegetables and potatoes/rice/pasta), how strongly they agree that meat ought to be at the centre of any meal or dish, and how strongly they reject that vegetarian food is especially tasty.*

Again, we see Sweden at the extreme meat end of the scale. The country has both a vocal vegetarian community and a large share of people who aim to eat less meat for sustainability reasons. The deep-rooted meat fixation is, however, something that unites different groups, requiring an effort for introducing more vegetables on the plate and pushing more people than in most

[2] Figures by the UN Food and Agriculture Organisation, aggregated by Our World in Data: https://ourworldindata.org/grapher/vegetable-consumption-per-capita?tab=chart&region=Europe&country=SWE~FIN~DNK~DEU~BEL~FRA~SVK~AUT~CZE~POL~NLD~LUX~Belgium-Luxembourg~OWID_CZS

countries to break with the mainstream and go fully vegetarian. As might be expected, the degree of meat fixation varies between demographic groups and people with different political views as much as it varies between countries: politically conservative or right-leaning, men, people with lower education or high income levels, older people and those living in the countryside all tend to be more meat-fixated than others.

Interestingly, if we look at consumption levels instead of attitudes, those who are older or have higher income, and to some extent those who live in the countryside, nonetheless also tend to eat more fruit and vegetables than others.

Following the star chefs in treating vegetables as the new sauce is a way in which vegetable advocates can push diners and home cooks towards eating more greens. We can also see a difference where some countries are more likely to have made the meat the name, or part of the name, of the dish. Changing the perception of vegetables into the main differentiator of the meal can have a potential to work also in the countries where dishes without meat in their names don't sound like food to the vast majority of the population that has not turned vegan. This may be less of an issue in a place like Alsace, where meat-heavy dishes like 'garnished sauerkraut' lend the centre stage to a vegetable despite being all but vegetarian. It is great to promote vegetable-centric dishes, too, but in regions like the Nordics (with its 'meat with...' food culture), there is a risk that some diners will feel alienated if there is a too strong push for 'vegetable dishes'. In such areas, the potential of tasty vegetable sides and garnishes is all the more important in order to increase vegetables' plate-share without causing discomfort in the process.

Vegetables – the 'sauce' for all sorts of 'protein'

Vegetables' potential as the new 'sauce' to complement other ingredients does not end with meat-centred dishes. The food industry has seen a protein boom, with growing numbers of products emphasising the amount of protein they contain or making special products with added protein to appeal to health-conscious consumers. After all, you need something to go with your protein pasta or something to serve your protein cheese with – and this is a position for fresh produce to claim. If vegetables are to be the new sauce everywhere, and not only in star chefs' kitchens, they need to go not only with meat, but with all sorts of 'protein'.

From alternative proteins to complex carbs

The experts aren't too fond of the protein trend. In Europe there might be children in low income families who may need more protein, including meat, but for the most part we need less protein. We don't need to eat so much meat. From a health and sustainability perspective it would, to the contrary, be beneficial to reduce meat consumption.

Francesco Branca at the WHO also claims that they, on the other hand, like legumes,mainly because of the complex carbohydrates they contain. We think this shows potential for a new movement as people tire of the hunt for proteins and their alternatives. Why not promote complex carb benefits instead? When will "source of complex carbs" on fresh produce shelves become a standard selling point?

[3] A variable classifying respondents along a scale between globalism and nationalism was created by combining responses to two scale questions, in which respondents were asked to what extend they agree that 'our politicians ought to focus on solving problems in our own country, instead of trying to help the whole world' and that 'politicians ought to put our planet and the global challenges first, instead of merely looking after the interests of their own country'.

2.3 It's time for fruit to get up on stage and perform

Fruit is at risk of being lost and forgotten in today's competitive food landscape. The industry and the worlds' fruit and veg departments need to find a way for fruit to play more and bigger roles at different meal occasions – not just breakfast, lunch & dinner. Snacks and light-meal culture vary a lot between markets. But they have one thing in common: fruit is losing ground to unhealthy processed snacks. The potential is huge for the industry and for customers to find new roles for fruit to play. Fruit needs to be there and be relevant and accessible as a snack, as we argue in Section 4.2, but it also needs to be part of other meals in consumers' minds, hearts and stomachs.

Is fruit the new salad?

Do people who eat a lot of fruit do anything differently than others? It would seem so. When examining which elements in the survey data correlate with each other, we came across one interrelationship between responses to three different survey questions which were important: people who eat a lot of fruit are likely to be the same people as those who eat fruit because it tastes good – and also the same as those who eat fruit cut into pieces.

It should perhaps come as no surprise that people who cut their fruit enjoy it more and therefore eat more of it. Who would expect people to eat a whole un-cut cucumber and appreciate the experience as much having cucumber sticks, or a salad? And who would deny that the sensation of indulging in a plate of finely cut pieces of apple is different from taking bites of a whole apple? We dare say that newly cut fresh fruit both looks better, is often more fragrant, and that its texture definitely feels different.

This experience seems to vary a little among the countries. While France and Germany are more reluctant to pre-cut fruit and vegetables, it is more common in the Netherlands and Denmark. One interpretation is that even a cut carrot or pear may seem like processed food, something considered less attractive in Germany, for example. This should not make the industry give up on convenience purchases, however. Fruit at the entrance to the store or at the cashier, perhaps packed, should also be available within arms-length for the consumer, whether cut or not.

Inspire consumers to cut their apples

How can we get more fruit salad to the people? One path is to inspire more people to spend the extra minutes it takes to cut fruit and make fruit salads at home. If more people can be encouraged to try to eat fruit in new forms and shapes, chances are that many will discover that they like it more. While not everyone will become a big fruit consumer by starting to cut their fruit into pieces before eating it (or having family members do it for them), some will.

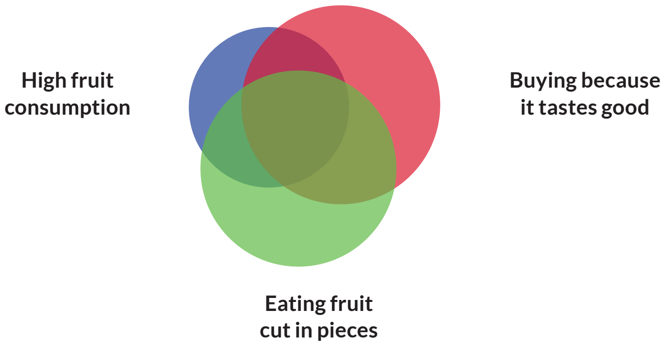


Figure 10. Overlap between respondents who eat a lot of fruit (green), who choose to buy fruit because it tastes good (orange), and who ate fruit cut into pieces over the last week.

Fruit salad bars – the new juice bars?

Another path is to make pre-cut fruit and mixed fruit salads easily available wherever people might be in need of a snack. One example of how this can be done can be seen in China, where 'fruit bars' have in recent years popped up in shopping centres and along shopping streets. Customers are offered the chance to pick and mix different kinds of pre-cut fruit – as well as small tomatoes and sometimes diced cucumber – for which they pay by weight. The concept is very similar to that of North-European candy stores, but with much healthier offerings. More on fruit snacking in Section 4.2.

2.4 What's in a name – your fruit is my vegetable

Several discussions, in the fields of biology as well as law and policy-making, have received attention for categorising species in ways that many outsiders find absurd. Notable examples include banana being a berry in scientific terms (which strawberries, raspberries, and blackberries are not), and carrots and cucumbers being treated as a fruit in the European Union's directive for jams.

Smoked watermelon – the culinary applications of fruit expands

Aside from scientific and political language quirks, we see category boundaries continuously being blurred and pushed also in the actual food world, by gourmet chefs as well as the big brands and home cooks. Tropical fruits are added to savoury dishes – think Mangoes in tacos – or added to BBQ dishes – such as grilled pineapple. All over the food landscape products are being introduced in new situations. Recent innovative uses of fruit include smoked watermelon ham and banana peel bacon, where the use of fresh produce is being expanded to new situations and tastes.

Grapes are my favourite berries – or is it fruit?

How about the everyday consumption of fruit and vegetables? It turns out that it is not only scientists and policy-makers who are making the distinctions between fruits, vegetables, and berries confusing – consumers are also contributing to blurring the boundaries between fresh produce categories. When we asked survey respondents to separately list their favourite fruits, berries, and vegetables, several products show up in more than one of these categories – in other words, what is a fruit to one person is a vegetable or a berry to someone else. Some respondents even expressed their own ambiguity, for example by giving the answer to their favourite berry as: ”grapes (if that’s a berry)”.

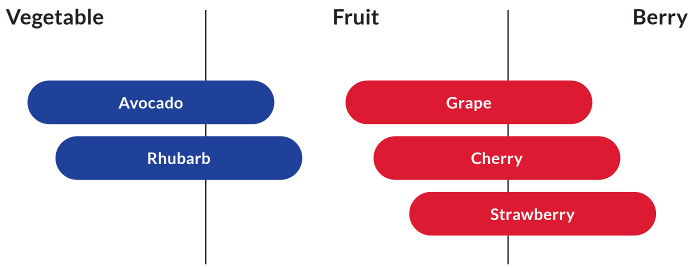


Figure 11. *Vegetables, fruits, and berries for which there is notable disagreement about classification.*

Being aware of the disagreements around which category certain products belong to may have relevance for product placement in stores, not least to help consumers find the products they are looking for. Perhaps some consumers among the 40% for whom avocado is a fruit buy less of it because they cannot find it among other fruits, although it is available in the vegetable aisle.

Intentionally blurring boundaries between greens and other food categories can also help to increase fruit and vegetable consumption. Behavioural researcher and consultant Nurit Nobel suggests that to “focus on putting products close to other categories, meet the consumers where they are and where they make their purchase decision in the store. For example, a supermarket chain put beans in the taco aisle to nudge people to make a vegetarian choice instead of buying meat.” This ties in with making the choice of fruit and vegetables more timely, focusing on finding ways to promote fresh produce where consumers are making their purchasing decisions in-store. Give consumers an idea of what vegetables can be used for, how they can complement other products, or be used as a substitute.

[4] Encyclopaedia Britannica: https://www.britannica.com/science/berry-plant-reproductive-body
[5] Council Directive 2001/113/EC of 20 December 2001 relating to fruit jams, jellies and marmalades and sweetened chestnut purée intended for human consumption, Annex III: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX-%3A02001L0113-20131118

Chapter 3

One size doesn't fit all

One size doesn’t fit all

While the media tends to focus on health and sustainability-driven consumers, there are other large consumer segments whose priorities lie elsewhere. They have different consumption drivers ranging from shame to showing off. We need to address them all, as one story doesn’t fit all.

3.1 So, you like apples? Have a carrot!

There is a somewhat mind-blowing insight, that there are taste-matching preferences at play that can influence you as a consumer towards a preference for either the tomato and banana cluster or for the apple and carrot cluster. Think how we can simplify offers and make sure people get what they want and like, giving recommendations to consumers based on these preferences.

Looking at which fruits, vegetables, and berries are typically mentioned as favourites by the same people, we get separate clusters of fruit and vegetable preferences. For example, banana people also tend to like tomatoes, cucumbers, and kiwi – whereas the apple people have a greater preference for carrots, pears, and potatoes.

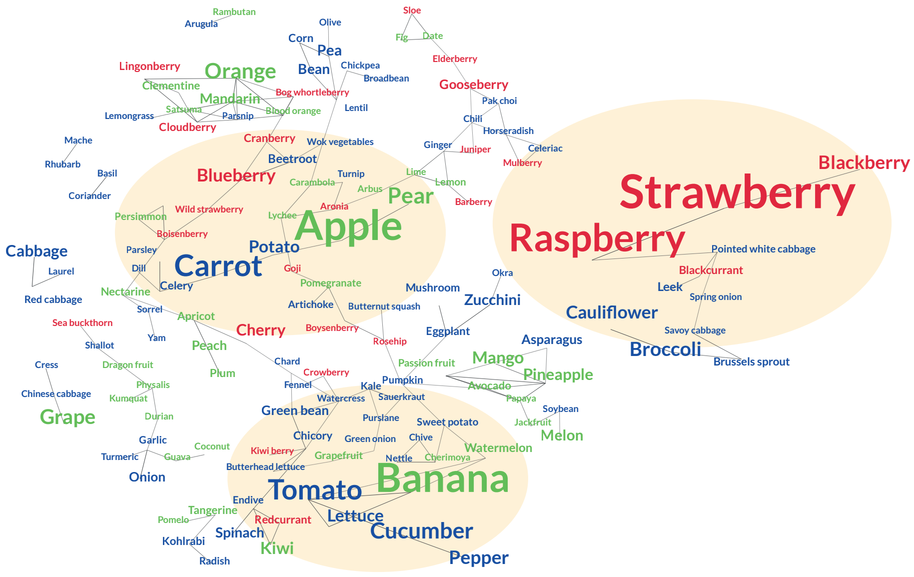


Figure 12. *Overview of how fruits, berries, and vegetables are connected in terms of preferences. The figure is based on a set of survey questions in which we asked for respondents’ top three favourite berries, as well as their top three favourite fruits and their top three favourite vegetables. The closer to each other two products are in the network, the more typically they are mentioned as favourites by the same respondents. Label size indicates how commonly something is mentioned as a favourite.*

Give recommendations to consumers based on preferences from the cluster – if you have bought apples, perhaps you would also like some carrots? Novelty and new combinations can drive interest in buying a wider variety of fruit and vegetables. Even better if recommendations are presented with recipes! The mixing of mangoes and avocado, for example, may be stimulated by showing them together, as they are not only appreciated by the same people but also go very well together. The network can serve as a map of preference clusters and might, for example, be used to inform new ways of placing and displaying different products in-store.

3.2 Four consumer profiles

People are different from each other in all sorts of ways, and how we relate to fruit and vegetables is no exception. No two consumers are entirely alike, but there are nonetheless certain behaviours and attitudes that often go together. When analysing the responses to the central questions in the survey, we see four main consumer profiles, as represented in Figure 13. They have different motivations for eating greens, but also different priorities when choosing them, and different levels of attachment to the products. These profiles should be seen as archetypes or personas, rather than clear-cut groups. This means that one and the same person may share attributes from more than one profile.

The profiles mainly vary along two dimensions: one being to what extent people are motivated to buy and eat greens by factors emerging from themselves and their family on the one hand and, on the other hand, by outside factors. The other dimension relates to the amount of vegetables and fruit (but not berries!) that they eat.

Figure 13. *Four consumer profiles with different levels of consumption of vegetables and fruit (excluding berries) and who are to varying degrees motivated by internal and external factors.*

The two profiles who eat more fruit and vegetables (at the top of Figure 13) have different reasons for doing so: one eats greens because it is good for them, while the other eats it because it is good for the world.

Contributing to a better world

Those who eat greens to contribute to a better world (top-left in Figure 13) consider things such as climate impact and labour conditions in production. They are also the most likely to think about vegetables before meat and potatoes, rice or pasta when cooking. These consumers are strongly motivated to eat their veggies, but, as eating greens is a social responsibility, the properties of the products themselves are of lesser importance. They are also the most likely to agree that they get a 'great feeling' from eating and cooking with vegetables – likely connected to knowing that they are doing something good. This profile is the most closely related to the 'LO-HAS', Lifestyle Of Health And Sustainability, a consumer segment that has been much discussed.

Convenience & habit

Their opposite is seen in the lower right in Figure 13, where people eat little fruit, vegetables, and berries and are most likely to think of meat first when cooking. People with this profile do eat some vegetables, of course. One of the factors influencing how much they eat is convenience; anything that makes it easier or nicer to buy, eat, cook with, and store products can help them increase their consumption. Habit is also especially important for this group, so once a routine of buying certain fruits and vegetables has been established, chances are it will be held onto. A sort of conservative attitude can also be seen as a sense of duty, eating fruits and vegetables owing to a sense that this is something 'one has to do'. This group is most closely related to the 'LOIGAS', Lifestyle Of Instant Gratification And Stability, which is a consumer segment we introduced in the Fruit and vegetable report of 2017 and explored further in the 2019 report. This is also an underserved segment that is not so much in focus in advertising, which means the potential and benefit of reaching this group is significant. Given that the people in this segment are not driven as much by desire and ideology, they are more responsive to their own sense of duty in relation to fruit and vegetable consumption. Nudging and anything that makes greens a more convenient choice are also important.

Healthy & tasty

The 'healthy & tasty' consumer profile shares high fruit and vegetable consumption levels with the 'better world' profile. Contrary to the latter's global considerations, however, the former has a personal and local focus. They primarily eat and buy fruit and vegetables because it tastes good and because it is good for themselves and their families. They also value local production more than others do. Possibly bridging their focus on the healthy and the local is an appreciation of fruit and vegetables as something natural.

Showing off

Lastly, we see a niche with an openly superficial approach to fresh produce. People with this profile share a low consumption level with those who have a ‘convenience & habit’ profile, but in contrast to the latter they do not get motivated to buy more by factors that are directly beneficial to themselves or their families, but rather by the status that they can get in the eyes of others. Photo-sharing opportunities, for example by showcasing elaborate berry desserts on Instagram, and other chances to impress others motivate this group of people, who also tend to find nice packaging to be worth something extra to a higher extent than others do. They are also targeted by food experiences, mainly in big cities, that increasingly focus on the visual aesthetics of the experience rather than just providing something to eat. In some cases taste even comes in second place to the visual aspects of the experience. A way to make these people eat more fruit and vegetables may be by using competitions and sparking consumers’ imagination by showing what can be created artistically with fruit and vegetables!

One interesting detail in Figure 13 is that the people who eat the most berries are not the ones located at the very top of the model (where those who eat most fruit and vegetables are), but at the very left (at the intersection of ‘Contributing to a better world’ and ‘Showing off’). This is one more expression of what we noted in Section 2.1: that berries are different from other fruit and vegetables in terms of who is eating them.

A useful social norm: the shame factor of not eating greens

Of relevance for understanding and communicating with the four profiles is a conception that is almost universally shared, both by those who eat a lot and most who eat little, is that it is good to eat greens. This social norm is beneficial for anyone who wants to influence people to buy and eat more, especially when targeting those who have a low consumption level today. Since the feeling of duty or obligation is prevalent among consumers with the ‘convenience & habit’ profile, they have already internalised this motivation, which can be used by the industry.

Although all groups share the ‘good to eat greens’ norm, the lower-right consumer profile in Figure 13 is however likely to be more sensitive towards who is the sender of any message relating to the greens norm, since loyalty in this segment may be directed more towards peers who are not as popular in society as the influencers popular in the lower-left.

3.3 Indifference and barriers – reasons for not eating greens

Most people acknowledge that it is good for us to eat fruit and vegetables, and yet a lot of us still don’t eat enough of them. When trying to change a behaviour, it is useful to look at the barriers preventing the specific behaviour from taking place. Understanding the barriers makes it easier to find ways in which these can be overcome, and for the desired behaviour to take place. Things consumers say are preventing them from buying and/or eating vegetables fall into three main clusters:

- Indifference, where consumers are not prioritising the buying and eating of vegetables. The main barriers identified in this cluster relate to not seeing oneself as a person who eats a lot of vegetables, as well as not buying fruits and vegetables as part of one's normal shopping routine.
- Intention-action gap, where consumers mean to buy vegetables, but often find excuses not to. The main barriers being not finding what they want or produce being low quality, vegetables being too expensive, or that produce tends to get spoiled.
- Absence of social pressure, where people find that no-one in their social circle cares about what they buy and eat, nor do their friends and family eat many vegetables.

Make vegetables the attractive choice…

The question is: how can these barriers be overcome to increase fruit and vegetable consumption? According to principles from nudging, to overcome barriers and change behaviours we can focus on making the choice easy, attractive, social, and timely. Here we will look at how to make the choice attractive and social.

The first two barriers, relating to not having an identity as a fruit and vegetable consumer, can be overcome by making fruit and vegetables more attractive. Experiments with different packaging or in-store marketing depending on the season can be effective – why not place Halloween-themed displays around products in November? Use colours, packaging, and new names to make produce stand out! While eating vegetables is not a prevalent part of some consumer groups' identities, things like barbecues can be. An increasingly popular way to serve vegetables is from the grill, according to Cindy Rijswick, at Rabobank, and food influencers from Youtube chefs to cookbook authors show the way by demonstrating how to grill, char, and sometimes smoke vegetables. Putting a flank steak directly onto hot coals in an open fire used to be cutting edge, but now the same is true for vegetables. With barbeque stereotypically portrayed as a manly way of cooking, a larger room for vegetables in this domain could potentially increase the appetite for fresh produce among some groups of men.

Another aspect is to use descriptive terms to make fruit and vegetables come across as tastier. 'Research shows how when you sell vegetables with more tempting names, for example "sizzling" asparagus, or "crunchy", it sells much better than if you just say "asparagus"', suggests Nurit Nobel. In doing this, we move past the point where consumers feel that they need to buy fruit and vegetables because they should, to instead buying them because they want to based on the description of their flavour.

…and the social

How do we make fruit and vegetable consumption more social? Leverage social norms and communicate what other people do – let consumers know that other people are buying fruit and vegetables. Seeing what other people around us do can nudge us towards desired behaviours – we rarely want to be the odd one out not following the norms. Use, for example, signs to indicate best-selling products, or highlight that the majority of consumers buy a certain amount of fruit and vegetables in a certain shop (if that is the case, of course!). And on a related note, make it easy for consumers to understand how much fruit and veg they need to eat and buy!

"It is hard for consumers to interpret these abstract ideas of what and how much we are supposed to eat – tell me what I need to eat instead. Saying that you need to eat 5 fistfuls of something instead of saying 500 grams has been shown to be more effective."

– Nurit Nobel

Chapter 4

Trends *shaping* the future

Trends shaping the future

Fruit & Veg needs strategic work to play a bigger role in the future. The industry is state of the art at being agile, but needs to be better at strategic work. We cannot rely on everybody else to make fresh produce a natural part of the future. In this chapter we walk through some of the most important trends shaping the future of fruit and vegetable consumption. We need to adapt and excel in areas like convenience, online, sustainability and low cost vs premium, not only in production but all the way to the consumer experience.

4.1 Does online drive markets?

There seems to be a correlation between online shopping and shopping at traditional fruit and vegetable markets. Respondents who shop for groceries at a market are 58 percent more likely than others to also buy foodstuff online. (20.4 percent of those who have bought food at a market in the last week have also bought food ingredients online over the last month, while only 12.9 percent of those who have not been shopping at a market have done so.)

This phenomenon can also be seen at a country level: in countries where we see respondents shop at markets more often than they do elsewhere, they consequently shop less in grocery stores, but they also tend to shop slightly more online (see Figure 14.)

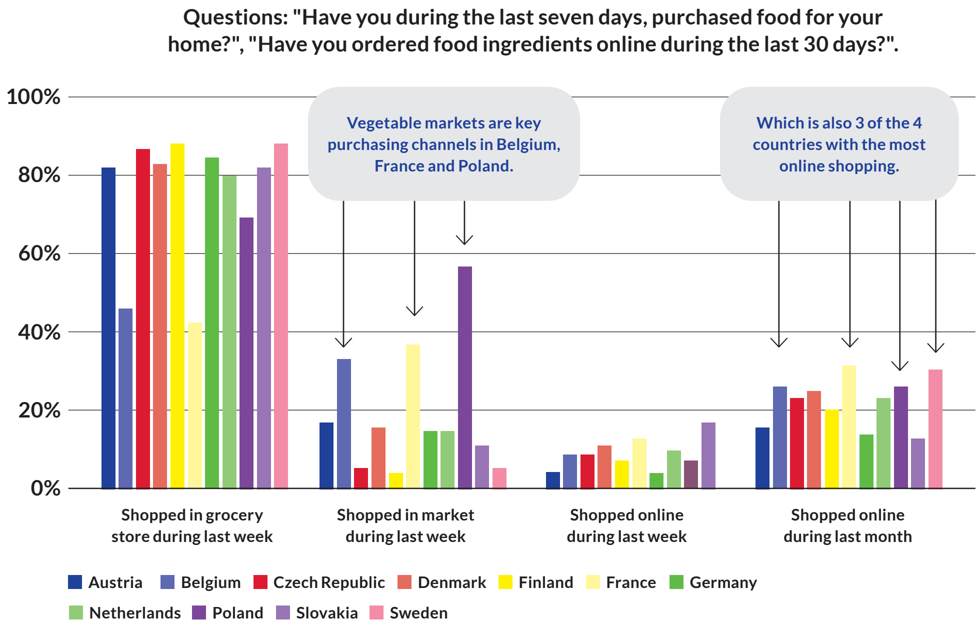


Figure 14. *Proportion of respondents who recently bought food through different purchasing channels.*

Online for interchangeable staples, markets for unique fresh produce

The two channels – markets and online stores – do seem to complement each other rather well, with the market offering precisely what online does not: letting you shop fresh produce both quickly and, not least, after having seen and maybe touched the products yourself. Online shopping can, for consumers who have gotten used to it, offer a more efficient means than a physical store for buying staples and dry goods.It can be just as good, as such products seldom vary in quality in a way that gives extra value to seeing and touching them yourself before choosing which specific goods to buy.

Fresh produce, on the other hand, often does. It therefore seems to follow that an offline and personal sales channel for fresh produce is a good complement to online stores where consumers buy their staples. One strategy for brick-and-mortar grocery stores, in a world where grocery shopping is slowly but steadily moving towards online channels, could be to try to fill the same function that a traditional market has, with a combination of knowledge, personal service, and the possibility of close-up inspections of the fresh food on offer. Perhaps staples won't be needed at all in the physical store of the future, if they are ordered online or subscribed to anyway? The French supermarket chain Grand Frais does not eschew staples, but by having fresh greens, meat, sea food, and cheeses as its main focus it nonetheless goes some way towards taking on a market's role in a grocery store format.

Are logistics getting fast enough for snack deliveries?

The extent to which mimicking fruit markets would be a viable way forward for grocery stores depends, among other things, on how fast fresh-produce e-commerce becomes. Online stores will not be showing consumers the exact fruits and vegetables they are buying ahead of placing an order anytime soon, so being able to do that will remain an advantage for offline formats. Their other advantage, speed, is something else. If vegetables, or snack-size boxes of pre-cut fruit, can be delivered within, say, half an hour, then they will be almost as good as convenience stores for spontaneous purchases. Such services are being introduced in big cities in several places around the world. In Europe, they are so far rare outside of places like London, but they are likely to spread. In China, where e-commerce overall has developed at a faster pace than in Europe, ordering boxes of pre-cut fruit when you feel it's getting time for a snack is increasingly common among the urban middle-class.

Shopping online could boost healthy choices

To the extent that consumers accept both ordering unseen fresh produce online and waiting for slow deliveries, a shift to online shopping can actually be beneficial for fruit and vegetable consumption. As consumers are generally myopic, prioritising short term rewards over long term gains, many opt for less healthy options when they buy something to eat immediately, but more healthy ones when making a planned purchase.

'When people are shopping online they tend to make healthier choices, because shopping online is a delayed choice. We don't get something we're going to consume this second, but something we might get tomorrow or in a few days. You can put aside your hunger and immediate wants.'

– Nurit Nobel

In a study of posts on social media related to a grocery retailer brand, we could see this effect to some extent. The food that was mentioned in relation to the future, i.e. planned purchases, were primarily healthy ingredients to cook from scratch. On the other hand, mentions of what had already been bought were dominated by things like candy, ice-cream, and fast food. These were not intended purchases, but happened to be put in the basket anyhow. This is also a lesson for the fruit and vegetable industry. Improving offers for the impulse buyer is important. Fruit and vegetables cannot be sold exclusively for ethical and health purposes. There is plenty of room for indulgence as well.

4.2 Convenience is key

A key to changing behaviours and increasing the consumption of fruit and vegetables is to simply make it easy. Presented with multiple options we tend to select the easiest option, and nowhere is this more prevalent than in our choices of what to eat. We repeat our favourite recipes, stick to the ingredients we know, and in general buy what we always buy, because it is easy and feels safe and comfortable. This is where convenience can help change consumer choices, argues behavioural consultant and researcher Nurit Nobel: 'From the perspective of making it easy for the consumer – the more it's washed, the more it's cut, the more it's ready to eat, the better it is.'

The increasing importance of convenience can be seen in eating as well as cooking and shopping habits. Commercial players have followed by offering more choices of ready-made meals as well as pre-cut salads, baby leaves and fruit, but also by introducing new meal kits and semi-finished products in response to home-cooking phenomena such as ready-meals, tin roasting or one pot pasta. Apart from providing convenience, such products offer an opportunity to introduce a large share of vegetables into a dish, thus making things easier for home chefs who want to eat more vegetables but don't know how to introduce them into their cooking.

It is also important to take the lead in the rising demand for 'plant-based' food. While the market for alternatives to meat is growing, there are so far few offerings from the fresh produce industry to meet the demand. When we talk to the experts, many of them have a sceptical view of today's 'plant-based' meat substitutes and dishes, which tend to be highly processed, not particularly healthy, include a lot of sodium etc. As Cindy Rijswick, at Rabobank Research Food and Agribusiness, puts it, the supermarkets like these products because they have high margins. Taking back the initiative from artificial substitutes to the 'real thing' – fresh produce – and making that a convenient alternative to meat is also something to work with. As we argue in Section 2.2, shifting people’s attention away from protein and towards complex carbs is one of the things that would help.

Not having to go out of your way

When we asked respondents what a convenient food purchase is for them, a common thread in responses was that a convenient food purchase is one for which you do not need to make a detour, either by ordering online or by choosing stores in convenient locations and reducing the number of visits there.

Figure 15. *Recurring themes in responses to the open question ‘What is a convenient food purchase, according to you?’*

The field of convenient food purchases is one in which we expect the boundaries to be rapidly pushed by technological development, through e-commerce as well as physical stores and new hybrid solutions. With more food shopping being done online and faster delivery alternatives, fresh produce can be sold in new ways. Rather than ordering take-out food, a box of vegetables can be delivered to consumers in less than an hour – something which is already happening in markets such as China. Looking at quick deliveries, below one hour, this has been seen for a couple of years and has during the pandemic been growing fast, along with the valuations of companies in the sector. Grab, Uber Eat, Delivery hero, Instacart, and Meituan are some examples. In Russia, all the platform companies are trying to become a leading delivery service, not least for food. Examples include Yandex,the search engine, Sberbank, the major bank, Ozon, the e-commerce company and X5, a leading grocery chain. They promise to deliver within 15 minutes within Moscow, according to Elena Karachova at consumer insight company Secret Sauce. This shows the strategic importance for the future of fast deliveries all over the world. For consumers not living close to a market with a good selection of fresh produce, the same need could be met by micro-fulfilment centres or dark stores and dark kitchens, where fresh fruit and vegetables and restaurant food are packed and prepared for quick deliveries.

Ride the snacking train

One of the themes discussed in the 2019 report was the trend for an increasingly large share of food being eaten in between main meals, both at home and on the go. A rise in snacking, or even 'grazing', at the expense of traditional meals can be seen to varying degrees in countries around the globe.

What does this mean for the consumption of fruit and vegetables? On the face of it, it's not good: if you replaced a cooked meal with a couple of sandwiches, or worse, biscuits or bars, chances are that you would be eating more flour and less veggies. Is the case lost for greens, then? No. If we look towards East Asia, we see examples not only of how many people eat less home-cooked meals and more snacks on-the-go or at the workplace, but also of measures that promoters of fruit and vegetables can take to ride the snacking train rather than getting run over by it. Such examples include the juice bar style fruit shops that we saw in Section 2.3, which often offer a few snack-friendly vegetables (such as cherry tomatoes or cucumber sticks) along with bananas and oranges. Deliveries as swift as lightning also mean you can have a fruit salad anytime and anywhere when you happen to feel peckish.

A key challenge for greens as the importance of convenience grows is to ensure there are enough fruit, vegetable, and berry choices that people can grab to eat as a snack. A reason why people may choose something based on flour and sugar when snacking, even if they might have preferred fruit or vegetables, can be the options available for purchase without having to make a detour. The key to getting fruit and vegetables onboard the snacking train is therefore to ensure that green and healthy bites are easily available when and where people want to have a snack. As noted above, not having to make detours is key to convenient food purchases in general. It is, understandably, even more important when it comes to getting a snack.

Most snacking occasions already include fruit

How important is fruit as a snack today? To get an idea, we asked respondents how many times they had eaten something that was not breakfast, lunch, or dinner (in other words, how many times they had eaten a snack) on the day before taking the survey, and how many of those times they had eaten fruit. It turns out people eat fruit when snacking more often than not.

In Figure 16, we see that the average number of daily snacks varies between 2 in France and 2.8 in its northern neighbour Belgium. The surveyed countries in central Europe are where respondents most often say they have had fruit as snacks (up to 79% of snacking in Slovakia). Having fruit as a snack is slightly less common in the Nordic countries. Finlanders and Swedes, however, tend to be more motivated than the average to buy fruit because it is practical to bring with you to eat as a snack.

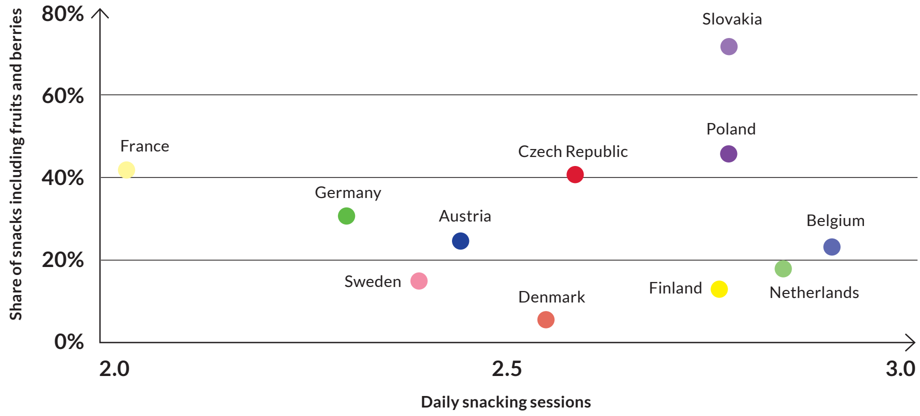


Figure 16. *X-axis: how many times respondents in different countries had, on average, eaten anything that was not breakfast, lunch, or dinner on the day before taking the survey. Y-axis: the proportion of those occasions where respondents ate fruit. Circle sizes: proportions of respondents motivated to buy and eat fruit, vegetables, and berries because 'bringing them with me to eat as snacks simplifies my daily life'.*

One of the differences that explains why snacking is more common in the Netherlands and Belgium than in neighbouring France is the strong tradition of having a proper lunch in France. According to professor Emely de Vet, 80% of food consumption in the Netherlands is homemade. It is usually the norm to bring lunch with you from home. This may translate to a less complete lunch that is compensated for with more snacking.

Another interesting thing to look at is school lunch. While lunch is served at schools in France and Germany, students are required to bring their own food in the Netherlands and Belgium to a larger extent. This may also foster a habit of a less complete lunch and more snacking occasions.

France has in general been considered as having a healthy population. While other countries like Spain and Italy may rank higher in terms what they eat, France may have something to teach the world when it comes to maintaining an eating culture focusing on meals rather than in-between meal snacking. In our study, French consumers stand out in terms of low level of snacking, as can be seen in Figure 16.

Fruit at the workplace, please!

One place stands out when we ask respondents where they wish fruits were more easily available, for example to eat as a snack: 24% of respondents wish there was fruit at their workplace. This is the most commonly indicated place among the options we presented. Not as common as finding fruit to already be available everywhere you want it (36%), but twice as common as not caring about whether fruit is readily available (13%). The second-most common place to wish for more fruit, shopping malls ,is selected by only 10% of respondents. In the 2019 report on Sweden, we saw that having access to a fruit bowl at your workplace is a key factor influencing your consumption level. The workplace fruit bowl may be something of a Nordic phenomenon, though, as the new survey shows the demand for more fruit at workplaces to be lowest in Denmark, Finland, and Sweden.

While the workplace is a place where many consciously wish for more fruit, there may be other locations where fruit (or vegetables!) would be bought, eaten, and appreciated if it were there, even if that is hard for most to imagine when the fruit is not there today. A low-odds bet would be that this is the case for public transportation facilities. This is, however, the type of place that fewest respondents have chosen in response to our question of where there should be more fruit, although public transportation hubs and similar spaces that many people pass through have proven to be an optimal place for other new consumption behaviours to become established. An example is how freesheet printed newspapers were distributed in public transport facilities from the 1990s, and quickly became one of the key ways for commuters to digest news in the pre-smartphone world. Again looking towards China, its high-speed train stations are among the locations where small shops are popping up offering fruit – typically cut in pieces and packed in plastic boxes – which passengers can easily take with them to have as snacks onboard the trains. We cannot rule out that this would be appreciated also by European consumers, although public transportation facilities is not where they are demanding fruit today.

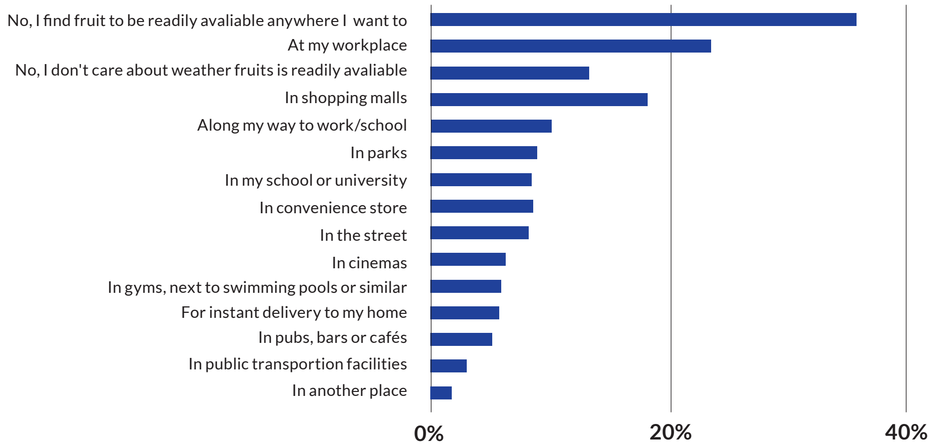


Figure 17. *Options selected in response to the survey question 'Are there any places or situations in which you wish that it was easier to buy or take fruit to eat as a snack?'*

Fruit has to be fun!

While fruit is mostly perceived to be available where consumers want to find it, there are several occasions where it is not. In a workshop during the project, one of the participants had experienced being at an amusement park without being able to buy any fruit. It is clearly a problem when junk food takes over the arena at convenience stores, vending machines, work places etc. And aren't amusement parks the perfect location for fruit? Making creative fruit and berry edible art, posting it on social media, and then eating. We look forward to seeing more shopping malls and amusement parks joining the creative fruit challenge. Revenue, happy parents, and perfect social media advertisement for free...

4.3 Put sustainability on the plate

There are vast differences in views and priorities between consumers, influencers, experts, and the industry when it comes to the perception of what it means to be sustainable regarding fruit and vegetables. For example, experts point to water-use as the most important issue, but consumers prioritise locally grown. For sustainability to be a bigger more vibrant part of the industry and the Fruit & Veg revolution, we need to understand each other better.

That food is local, regional, or national is one of the biggest deciding factors for consumers, making labels more important in illustrating a product's origin. The countries where local is particularly important are France, Austria, and Slovakia, but the factor is also overall the most important for consumers.

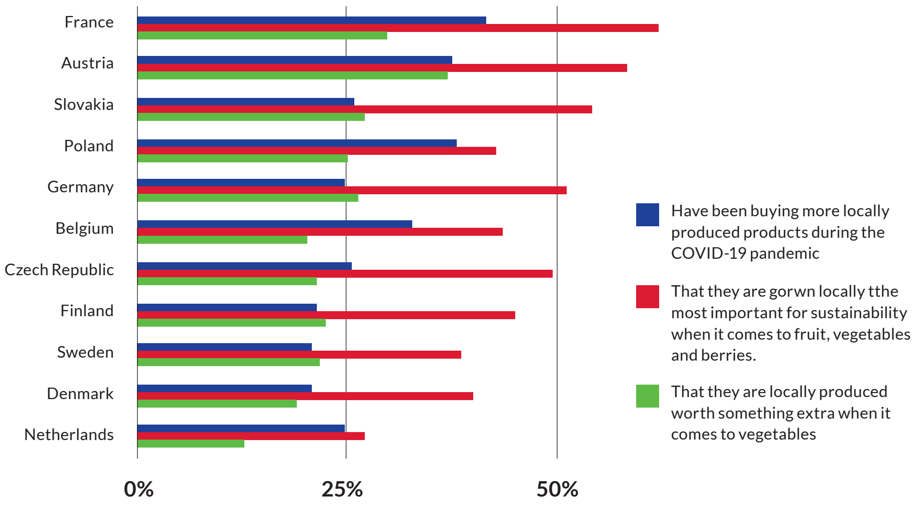


Figure 18. *Proportion of respondents in each country who selected an option or agreed with a statement related to local production in response to three different survey questions.*

1	That they are grown locally
2	That their production does not pollute the local environment where they are grown
3	That their production does not contribute to polluting the seas
4	That their production does not contribute to a lot of greenhouse gas emissions
5	That workers involved in their production have been decently paid
6	That they don't have any unnecessary packaging
7	That they are free from artificial additives, poison and pesticides
8	That forced labour or child labour has not been part of their production
9	I never think about sustainability in relation to fruit, vegetables, and berries
10	That their production contributes positively to the local economy

Figure 19. *The ten most selected options (in order of the number of selections) in response to the survey question 'What do you find most important for sustainability when it comes to fruit, vegetables, and berries?' In total, 21 options were presented, of which up to three could be selected.*

Austria is in general the most conscious within the area of "Trust food" with a particularly strong preference for vegetables without artificial ingredients, poison and pesticides: 42% of respondents in Austria prioritise this as worth something extra, compared to 25% across countries and around 15% in Belgium and the Netherlands at the other end of the scale. Austrian consumers also have the highest preference for origin of vegetables, in terms of what attributes people think give them extra value. (See Figure 18.) This is confirmed in the interviews, where Austrians' preference for locally grown food is mentioned.

The appetite for local produce has to some extent taken over from organic as the main indicator of sustainability for consumers – though this association might be misplaced in terms of resource efficiency and climate impact, as research has shown that transport tends to only account for a small percentage of a product's carbon footprint. Dr Francesco Branca is the Director of the Department of Nutrition for Health and Development in the World Health Organization. He says that there is a need to provide better guidance to consumers. A measure like food miles for example may not be particularly good as guidance for the environment. At the WHO they are looking at the possibility to find better measures for guidance. From that perspective, there is a need to change the narrative around local: while local produce may in some places support financial and social sustainability, ecological sustainability could be improved by actually buying imported produce that has been grown sustainably and in season.

When consumers list the most important sustainability aspects in our survey the top three categories are:

- That they are grown locally
- That their production does not pollute the local environment where they are grown
- That their production does not contribute to polluting the seas

We should be careful in judging consumers as being wrong when they prioritise local. An opportunistic attitude could be that we need to serve consumers and their priorities, even if we don't agree as an industry. But, more importantly, we need to understand the many facets of why consumers choose local as their top priority. It may be as much about familiarity, empathy with people nearby, and an ideal about the small context in a large and complex world, as with health and climate change considerations.

In some areas the industry is improving. Manuel Madrid at Foodprofits mentions the Global GAP, Good Agricultural Processes, which has improved worker conditions across the globe. Stephan Bruhn at Salling Group also confirms the increased focus on worker conditions within retail. On the other hand Manuel stresses that productivity and soil health is a growing concern. The documentaty "Kiss the ground" and the book "Growing a revolution – bringing our soil back to life" have pointed to the importance of the microbiological health of the soil. When consumers prioritise reducing pollution at the local production, this could be seen as an aspect of concern for the local.

When Rabobank together with Fruit Logistica listed the most important sustainability aspects according to the industry professionals in 2019 the top three categories were:

- Water use
- Food waste and loss
- Packaging

When the World Economic Forum lists the top threats to the world in terms of impact the top three in 2020 were:

- Climate action failure
- Weapons of mass destruction
- Biodiversity loss

For consumers in our survey, in contrast, water consumption ranks sixteenth and biodiversity contribution ranks fifteenth.

It is clear that the alignment between consumers, industry professionals and World Economic Forum's experts is quite weak. If the fruit and vegetable industry believes that water use is a top priority and biodiversity loss is one of the most important global risks, it remains a lot of work to make consumers part of working towards these goals. Part of this is to make people understand and prioritise based on what's best for the planet. Part of this is also making it possible to choose fruit and vegetables in line with these objectives.

The problems are also complex to handle. Water use may be a critical factor in some parts of the world while it is less of a concern in other. The nature of the problem shows that cooperation across the industry and with various stakeholders becomes more important. We need to do great things together.

[6] https://ourworldindata.org/environmental-impacts-of-food#you-want-to-reduce-the-carbon-footprint-of-your-food-focus-on-what-you-eat-not-whether-your-food-is-local

4.4 Low-cost and premium: towards increased segmentation

While the growing share of low cost products and low cost retail are seen by most people in grocery retailing and in most markets, there is also a growing interest in premium products in many markets. In particular, it might be interesting to note that premium alternatives of relatively cheap products have been on the rise for long. This goes for both ingredients such as potatoes, pasta, and salt, as well as meals such as burgers and hot dogs.

The trend can also be seen in fresh produce. The two trends may look contradictory, but are two sides of a move away from the common ground in the middle. Together, the growing demand for low-cost and premium create favourable conditions for product segmentation.

In one survey question, we asked respondents to imagine that a grocery store in which they are shopping were to divide its fruit and vegetable offerings more clearly into...

- one cheaper category, and...
- another category which would be more expensive but also higher quality.

We then asked whether this would ('definitely' or 'quite likely') influence them to eat more fruit and vegetables, from either of the categories, or not. Responses supported that there is a market for both categories: two thirds of respondents agreed that they think they would eat more with this categorisation, roughly equally divided between the cheaper category (31.8%) and the more expensive one with higher quality (33.2%).

Premium foodies and frugal bargain-hunters in all income groups

As you might expect, the interest in a premium category rises with higher income, while those who have lower income tend to be more interested in the low-cost category. However, the differences between income groups are not that big. There is a clear interest in both imaginary product categories from all income segments. Most notably, the 15.3% of respondents with low income who agree they would definitely eat more from the more expensive category is almost as large as the share among high-income respondents (17.7%) who say the same. (See Figure 20.) This tells us that there are foodies who allocate a relatively large share of a low income to good food, just as there are frugal bargain shoppers in the high-income group. A brand or store promoting a low-cost segment must therefore remember that its customers would not always be low income, far from it. A high-quality segment is, correspondingly, attractive across income groups, as most consumers can afford to buy premium fruit or vegetables, at least occasionally.

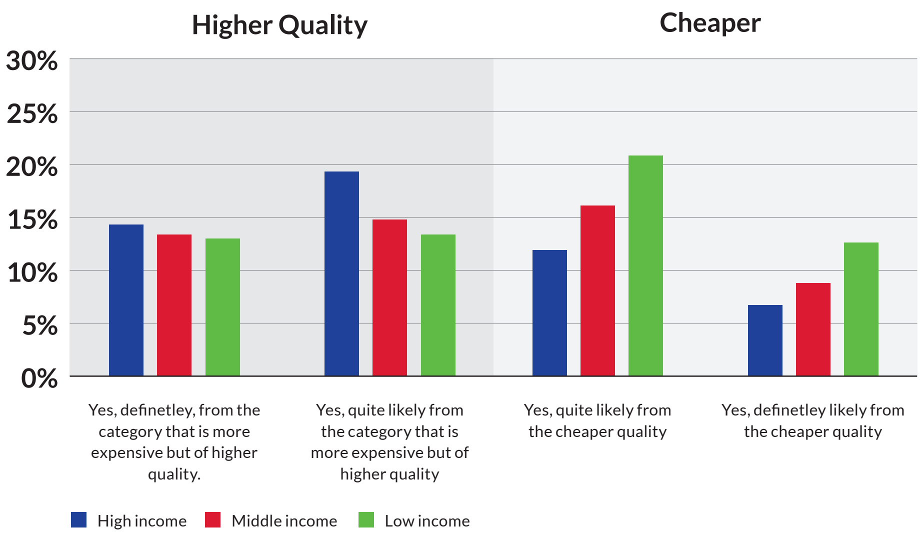


Figure 20. *Responses, by income level, to the survey question 'Imagine that a grocery store, in which you are shopping, were to offer fruit and vegetables that were more clearly divided into separate categories. One of the categories would be clearly cheaper, while the other would be more expensive but also of higher quality. Do you think this would influence you to eat more fruit and vegetables?'*

Affordable self-made premium?

Being price conscious does not have to mean we don't care about the food we buy, however. While being a foodie is often associated with trying out new, exotic, or exclusive foods, there has also been a growing interest among those interested in food to cook good, healthy dishes made with whole foods while trying to keep costs down. Several cookbooks have been published on topics such as "Food for under X amount". This ties in with other similar trends, such as the desire to live a simpler life, using what we have available, fermenting, composting, and general self-sufficiency. Show that food can be fun and tasty while also being affordable, and ensure that there are affordable options alongside premium products to attract more consumers to the world of fruit and veg!

One tricky thing about fresh produce is that the quality might differ between months and between years, as well as handling, soil, variety etc. To get consumers to choose premium products more consistently, the quality of those products also needs to be consistent, and they need to be available for consumers to be able to build a habit of buying more premium products.

About Kairos Future

Kairos Future is an international consulting and research company that assists companies, organizations and leaders to understand and shape their futures. We work as consultants for strategic futures, providing our clients with trend analysis and scenario planning, strategy and innovation, strategic change and capability development. Our aim is to make complexity actionable. Our vision is a world where everybody puts future first. The company was founded in 1993, has its head office in Stockholm, offices in Gothenburg, Malmö, Shanghai and representatives and partners around the globe.

For more information visit www.kairosfuture.com or contact us:

Kairos Future

Box 804 (Visiting address: Klarabergshuset, Västra Järnvägsgatan 3), SE-101 36 Stockholm, Tel. +46 (0) 8 545 225 00, info@kairosfuture.com, www.kairosfuture.com

Sources

[2] Figures by the UN Food and Agriculture Organisation, aggregated by Our World in Data: https://ourworldindata.org/grapher/vegetable-consumption-per-capita?tab=chart&region=Europe&country=SWE~FIN~DNK~DEU~BEL~FRA~SVK~AUT~CZE~POL~NLD~LUX~-Belgium-Luxembourg~OWID_CZS

[4] Encyclopaedia Britannica: https://www.britannica.com/science/berry-plant-reproductive-body

[5] Council Directive 2001/113/EC of 20 December 2001 relating to fruit jams, jellies and marmalades and sweetened chestnut purée intended for human consumption, Annex III: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02001L0113-20131118

[6] https://ourworldindata.org/environmental-impacts-of-food#you-want-to-reduce-the-carbon-footprint-of-your-food-focus-on-what-you-eat-not-whether-your-food-is-local

In addition to these sources and the many wise and pleasant people mentioned in the report, of course a large team and many reconnaissances and discussions have formed the basis of the Consumer Compass reports we have produced over the years. Thank you to everyone who contributed!

Vincent Dolan, *VP Marketing & Communications, Dole EMEA*
marketing@doleplc.com
www.doleplc.com