https://www.mushroomcouncil.com/mushroom-sustainability-story/#:~:text=A%20new%20mushroom%20sustainability%20study,pounds%20of%20CO2%20equivalent%20emissions

Certificates
There are no specific certificates for the sustainability of mushrooms. However general certificates also apply to the mushroom growers or trader, such as IFS, BRC, SKAL, Global-GAP, Planet Proof, Grasp, Fair Produce

Consumers
Fresh mushrooms are sold in punnets in retail stores. This allows them to be protected from blemishes when handled, from contamination by handling and keep their freshness longer. Recently the mushroom sector has made big efforts to find other packaging alternatives going from plastic to cardboard or wood and produce less waste.

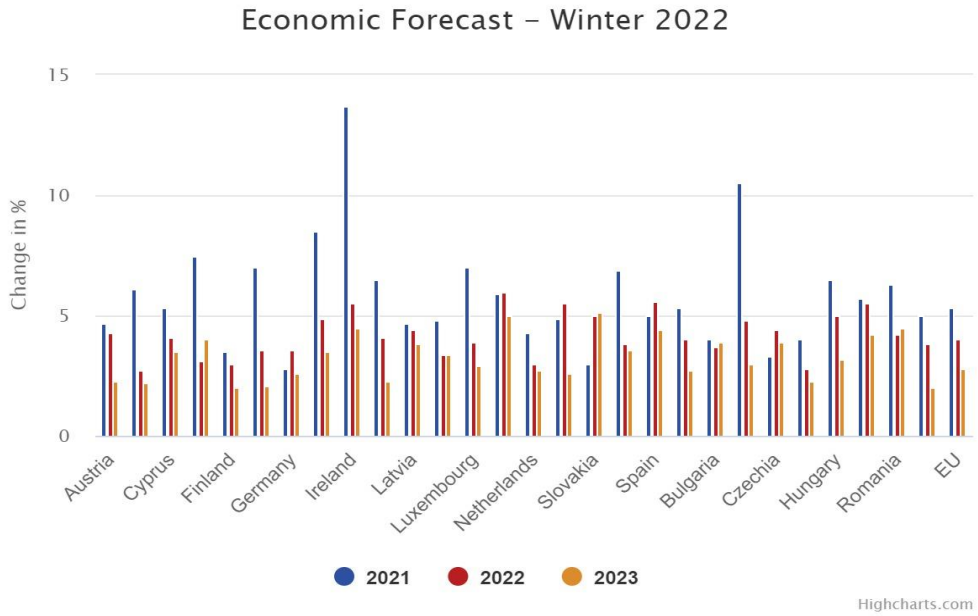
Sustainable ambition
The ambition of the European mushroom sector is to highlight the high value/low price of cultivated fresh mushrooms in a more sustainable and healthy diet.

1.2 Market analysis and specific project objectives

Market analysis and specific objectives
Describe how the objectives of the project are based on a market analysis. What issue/challenge/gap does the project aim to address? A SWOT analysis per target country should be included in the market analysis. The project objectives should be clear, specific measurable, realistic and achievable (SMART) within the duration of the project. For each objective, appropriate impact indicators for measuring achievement (including baseline value and target value) will have to be defined in section 2.6.

Economic outlook for Europe 2022-2025

The EU economy entered the new year on a weaker note than previously projected. Following a strong recovery by 5.3% in 2021, the EU economy is now forecast to grow by 4.0% in 2022, as in the euro area, and by 2.8% in 2023 (2.7% in the euro area).



Source: EU Report: Winter 2022 Economic Forecast: Growth expected to regain traction after winter slowdown

Persistent logistic & supply bottlenecks, including shortages of semiconductors and some metal commodities, keep weighing on production, as do the elevated prices of energy. Stronger than expected inflationary pressures weigh on households' purchasing power. Inflationary pressures are expected to moderate towards the end of the year. Compared to the Autumn Forecast, inflation projections have been revised up, as energy prices are now set to remain high for longer and price pressures are broadening to several categories of goods and services. Inflation in the euro area is projected to peak in the first quarter of 2022 and remain above 3% until the third quarter of the year. Inflation is expected to decline markedly in the final quarter of the year and settle at below 2% next year. Overall, inflation in the euro area is forecast to increase from 2.6% in 2021 (2.9% in the EU) to 3.5% (3.9% EU) in 2022, before declining to 1.7% (1.9% EU) in 2023.
On the upside, household consumption could grow more strongly, as observed following previous waves, while investments fostered by the RRF could generate a stronger impulse to activity. The inflation projections

are subject to upside risks if cost pressures are passed on from producer to consumer prices to a larger extent, increasing the likelihood of strong second-round effects.
NOTE: Risks to the growth and inflation outlook are aggravated by geopolitical tensions in Eastern Europe, like the recent and ongoing war in the Ukraine and the resulting energy crisis.

EU Production (per country) of mushrooms

Cultivated mushrooms have the particularity to be produced year-round and indoor, using wastes from agriculture (straw and horse-manure most frequently) to grow. Mushrooms as fungus are unique and an under-apricated product. Mushrooms are high in Unami compounds, great texture (meat substitute), Vitamin D, other vitamins & minerals (such as Selenium & B12), antioxidants including ergothioneine: https://www.ecronicon.com/ecnu/ECNU-17-01008.php (*Agaricus bisporus*), high in beta glucans to boost the immune system. The best known and consumed cultivated mushroom is the button mushroom (There are several others which are grown in the EU-27 but remains niche markets: Shiitake, Oysters/ Pleurotus, etc. (no available/reliable data production for these). This market analysis focuses on *Agaricus bisporus* mushrooms.



Cultivated mushrooms are produced in most of the Members States. The total EU-27 production (for fresh & to be processed) amounts 1,063,700 tons of *Agaricus bisporus* in 2020 (source GEPC). The 9 target countries production represents with 994,200 tons of the total EU-27 production. For only the fresh market the 9 target countries represent with 621,300 tons 90% of the fresh market.

The main European producers of Agaricus:

Approx Yearly Output in '000 tonnes

	1988	1998	2008	2018
France	195	150	110	95
Netherlands Belgium & Germany	145	190	230	250
UK (non-EU)	110	95	50	60
Ireland	55	70	66	68
Poland	55	90	180	290

The production is oriented for the fresh market: 64 % of the volumes, the rest is for the processed market (canned essentially). The two biggest producers either for the fresh or for the processed market are Poland and Netherlands with 50 % of the total EU-27 production. The fresh *Agaricus* volumes produced by Member States are globally stable since 2018 except for Poland where they are dynamic. Because of the high investments needed to grow *Agaricus*, the production per country does not vary a lot from one year to another. With more than 2,700 tons/hectare the production has a very efficient production per hectare.

Both costs of labour (40-45%) and energy (10%) are important aspects of the production.

Overall table for FRESH Agaricus:

Volumes in ton	Total production			Production for fresh market			Production to be processed		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Poland	270 000	260 000	**295 000**	185 000	175 000	200 000	85 000	85 000	95 000
Netherlands	260 000	237 500	**240 000**	100 000	95 000	90 000	160 000	142 500	150 000
Spain	129 700	130 700	**130 700**	65 800	66 800	66 800	63 900	63 900	63 900
France	90 000	90 000	**82 000**	41 000	42 000	42 000	49 000	48 000	40 000
Ireland	65 000	64 000	**64 000**	63 000	62 000	62 000	2 000	2 000	2 000
Italy	62 000	62 000	**62 000**	54 000	54 000	54 000	8 000	8 000	8 000
Belgium	25 700	25 000	**23 500**	21 400	21 000	19 500	4 300	4 000	4 000
Hungary	29 000	27 000	**21 000**	21 800	20 000	18 000	7 200	7 000	3 000
Germany	76 000	76 000	**76 000**	69 000	69 000	69 000	7 000	7 000	7 000
Other Members States	69 500	69 500	**69 500**	63 000	63 000	63 000	6 500	6 500	6 500
Production of the 9 target countries	1 007 400	972 200	**994 200**	621 000	604 800	621 300	386 400	367 400	372 900
EU-27 production	**1 076 900**	**1 041 700**	**1 063 700**	**684 000**	**667 800**	**684 300**	**392 900**	**373 900**	**379 400**

Source: GEPC

Import EU & per country

The EU-27 trade balance for fresh *Agaricus* is largely positive. Because of the perishability of the Agaricus mushrooms (they must be consumed maximum 5 days after harvest), the trade is essentially intra-European. The European imports from third countries represent less than 1% of the EU-27 production and only 4% of the total EU-27 imports. Germany and France are the biggest importers. The Netherlands data are not to be considered as imports volumes for the internal Dutch market (transit data).

Fresh *Agaricus bisporus* imports in ton	2018	2019	2020	**Share of imports 2020 in %**
Germany	71 683	69 618	69 883	**29%**
Netherlands	21 723	19 004	34 716	**15%**
France	24 603	25 241	25 158	**11%**
Belgium	14 777	16 409	18 668	**8%**
Ireland	327	8 912	10 179	**4%**
Spain	2 087	1 559	1 522	**1%**
Italy	7 899	10 356	7 580	**3%**
Hungary	703	1 490	2 546	**1%**
Poland	2 333	2 611	3 121	**1%**
Other Member States	65 910	69 351	63 542	**27%**
EU-27 from third countries	582	9 161	10 583	**4%**
EU-27 intra-European	211 462	215 390	226 331	**96%**
Imports of the 9 target countries	**146 134**	**155 200**	**173 373**	**73%**
Total EU-27 imports	**212 044**	**224 551**	**236 915**	**100%**

ource: Eurostat NOTA BENE: fresh mushroom figures not including mushrooms for the processed market

Export per country & EU total

The exports of fresh *Agaricus* mushrooms were mainly intra-European until the exit of the United Kingdom.

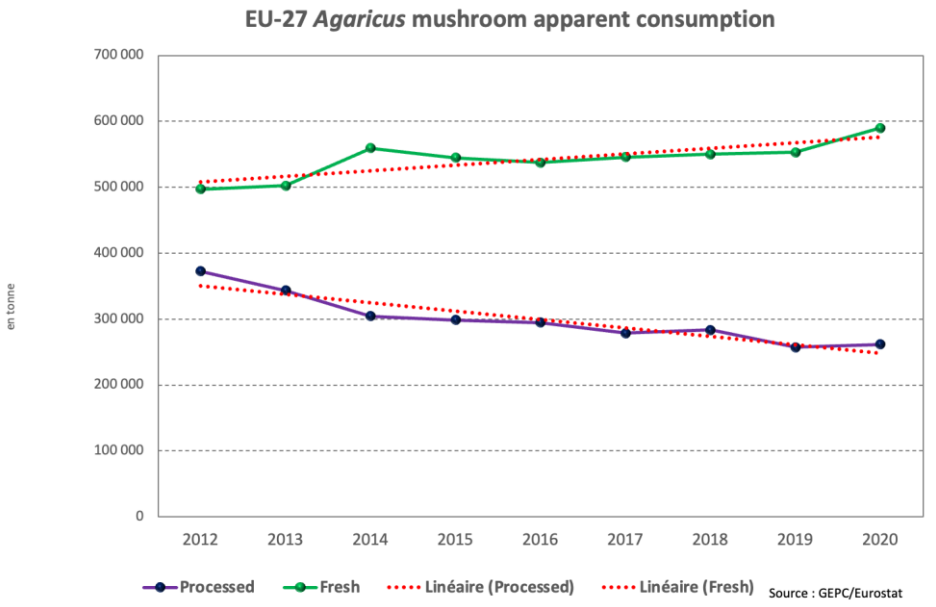
More than half of the EU-27 exports of fresh *Agaricus* mushrooms are made by Poland. When adding the Netherlands and Ireland, it is 84% of the EU-27 exports. The exports to third countries are essentially about the United Kingdom which is a big consumer of fresh *Agaricus* mushrooms.

Fresh *Agaricus bisporus* exports in ton	2018	2019	2020	**Share of exports 2020 in %**
Belgium	19 593	17 516	20 126	**6%**
Germany	7 559	7 934	6 692	**2%**
Ireland	30 584	44 199	40 229	**11%**
Spain	3 388	4 529	4 177	**1%**
France	268	323	606	**0%**
Italy	488	552	655	**0%**
Hungary	4 977	6 690	7 606	**2%**
Netherlands	69 955	59 759	61 810	**17%**
Poland	235 562	212 043	202 053	**56%**
Other Member States	16 901	16 439	18 779	**5%**
EU-27 to third countries	134 396	128 045	116 326	**32%**
EU-27 intra-European	254 879	241 938	246 406	**68%**
Exports of the 9 target countries	**372 374**	**353 544**	**343 953**	**95%**
Total EU-27 exports	**389 275**	**369 983**	**362 731**	**100%**

Source: Eurostat NOTA BENE: fresh mushroom figures not including mushrooms for the processed market

Consumption of mushrooms + prognose 2022, etc.

The apparent consumption for fresh *Agaricus* is quite dynamic in the EU-27.



NOTA: be aware that these EU-27 apparent consumption data does not take stocks into account (data not available).

The EU-27 apparent consumption per capita for fresh *Agaricus* mushrooms amounts to 1.3 kg. The average consumption of fresh mushrooms in the 9 target countries is also 1.3 kg/€ 3.90, based on an average European wholesale price of € 3/Kg. The consumption/total sales is 450,720,000 Kg (€ 1.352 million). Ireland and the Netherlands, the consumption is far above average. Compared to this, there is still progress to do for Members States such as France, Italy, and Poland.

2020 Fresh *Agaricus bisporus* mushroom	Production in ton	Imports in ton	Exports in ton	Apparent consumption in ton	Population (millions)	Apparent consumption per capita in kg	
Ireland	62 000	10 179	40 229	31 951	5	6,4	*
Netherlands	90 000	34 716	61 810	62 906	17	3,7	*
Belgium	19 500	18 668	20 126	18 042	12	1,5	
Germany	69 000	69 883	6 692	132 191	84	1,6	
Spain	66 800	1 522	4 177	64 145	47	1,4	
Hungary	18 000	2 546	7 606	12 940	10	1,3	
France	42 000	25 158	606	66 552	65	1,0	
Italy	54 000	7 580	655	60 925	60	1,0	
Poland	200 000	3 121	202 053	1 068	38	0,0	*
Other EU27	63 000	63 542	18 779	107 763	103	1,0	
9 target countries	**621 300**	**173 373**	**343 953**	**450 720**	**338**	**1,3**	
EU-27	**694 300**	**10 583**	**116 326**	**588 557**	**447**	**1,3**	

** The apparent consumptions of fresh Agaricus mushrooms are overestimated for Ireland & Netherlands (our estimation would be 3.3 kg per capita for Ireland and less than 3 kg per capita for the Netherlands) and underestimated for Poland (rather less than 1kg per capita). This is due to the Eurostat imports and exports calculation method for which the volumes for mandatory custom declarations regarding imports and/or exports are not the same for each member states. Nevertheless, these biases will be the same for the calculation of the apparent consumptions after this 3-year program.*
Source: GEPC/Eurostat NOTA BENE: fresh mushroom figures not including mushrooms for the processed market

Consuming more mushrooms in the EU-27 is possible and highly complies with current European policies:

- According to the Eurobarometer (December 2020), 87% of the European wish that EU be more proactive in the promotion of the food sustainability in the world. Consumers think that the two most important aspects of a healthy and sustainable food are based on the food diversity and on more fruits &vegetables.
- Besides the objectives of the European plan against cancer encourage a more plant-based diet, with less red and/or processed meat and other aliments linked to the cancer risks.

Overall market trends & developments for mushrooms

Mushrooms fit in three major trends: plant-based eating, health benefits (boosting immune system) and sustainability. The popularity of the plant-based diet is growing. Mushrooms are in a unique position to become a key ingredient in the plant-based diet. With so many people trying to eat less meat, mushrooms are one of the most versatile on the vegetable aisle to make things that bit easier.
The overall consumption of mushrooms is momentary 1.3 Kg/capita/year in the 27 EU countries and also 1.3 Kg/capita/year in the 9 target countries. This could be increased on the long term to 5 Kg/capita/year. For the coming 3 campaign years a growth to 1.6 Kg/capita/year at the target group is reasonable.
Mushrooms sales has been stable for a flat price in previous 3-5 years of € 3/Kg. The total sales have increased overall with about 15% in the last 6 months (2021-2022). The increase in 2021-2022 was due to the pandemic and high inflation. Because of the pandemic people were looking for healthy and local foods in which mushrooms fit very well. On the other hand, vegan and flexitarian food trends are immensely popular and mushrooms mean suitable alternative to substitute meat. With the flavoursome and meat texture, mushrooms are a perfect choice to eat more vegetables and less meat. In the coming years, the sales/consumption is expected to stay stable to an expected slight decrease if no extra attention/promotion will be carried out.

Distribution - wholesale and per retail channel

Fresh mushrooms are mainly sold (70% of the sales) in retail (hyper and supermarkets). The other 30% is sold to the food service. The wholesale price retail and food service pay to the growers has in the past 3-years been very stable with € 3/Kg. The year 2019 will be taken as a reference year, while 2020 & 2021 were exceptional years, which cannot be seen as a 'normal' trend.

Impacts of Covid-19 on the European mushroom sector

The covid pandemic dominated life across Europe in 2020 and 2021. It presented the mushroom industry with both challenges and opportunities. Production methods had to be adapted to keep staff safe, which meant more investment. The lockdowns across Europe carried out to contain the spread of the coronavirus meant that working from home became common, on a scale never seen before. This led to a decrease in food service sales, with many restaurants closed or only offering limited services.

However, the decrease in food service sales were more than compensated for by an increase in retail sales. More people working from home resulted in more home cooking, and increased demand for fresh mushrooms. In addition, people became more interested in healthy eating, as way of staying healthy, and this led to an increase in fruit and vegetable consumption,
As the European economies opened up towards the end of 2021, there has been a drop in retail sales, and also an increase in food service sales. Overall, though, sales in general remain at levels above 2019, and part of the objective of this campaign is to maintain as much of these increased sales at possible.

Country profiles

Belgium

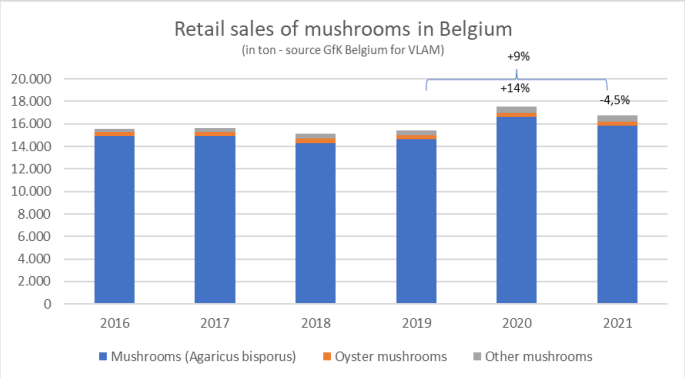
- Population: 11.6 million
- Mushroom (Agaricus) output: production 28,000 tons (for the fresh and processing market)
- Trade Market: 16% of mushrooms exported

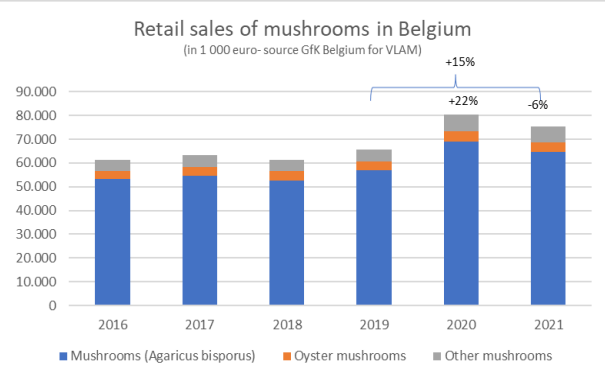
Production

The number of mushroom growers in Flanders has declined sharply in recent decades. While our region still had 137 growers thirty years ago, it is estimated that there are still about 30 left. Cultivation is concentrated in West Flanders and Limburg. In addition to growers of white and chestnut mushrooms, there are several companies that specialize in oyster mushrooms and exotic mushroom varieties, but this number is limited. Although there was an increase in scale in the sector, production also decreased. Where production in 1996 was still 45,000 tons of mushrooms, this had fallen to 28,000 tons a few years ago. This decline in the sector, which was also observed in the Netherlands, can be explained by the emergence of Poland as a production country that grew strongly and produces about 270,000 tons of mushrooms on an annual basis (data 2017).

Consumption

The retail market for mushrooms in Belgium amounts to 16 700 tons or 75.4 million euro. 78% of mushrooms are consumed in-home and 22% out-of-home. So, the total consumption is estimated at 21 500 ton.
The market grew with double digits in 2020 (+14% in volume and +22% in value). The market has declined slightly in 2021 (-4,5% in volume and -6% in value) as the economy reopens but remains higher than pre Covid times (+9% in volume and +15% in value).





Source: GfK Belgium for VLAM

Shoppers in Belgium

	product	shopper aged <30	shopper aged 30-39	shopper aged 40-49	shopper aged 50-64	shopper aged >65	Total Belgium
in ton	**Vegetables**	26.349	60.684	84.125	139.643	132.609	443.410
%		*5,9%*	*13,7%*	*19,0%*	*31,5%*	*29,9%*	*100,0%*
in ton	**Mushroom**	1.099	2.528	3.167	5.808	4.134	16.736
%		*6,6%*	*15,1%*	*18,9%*	*34,7%*	*24,7%*	*100,0%*

Source: GfK Belgium for VLAM

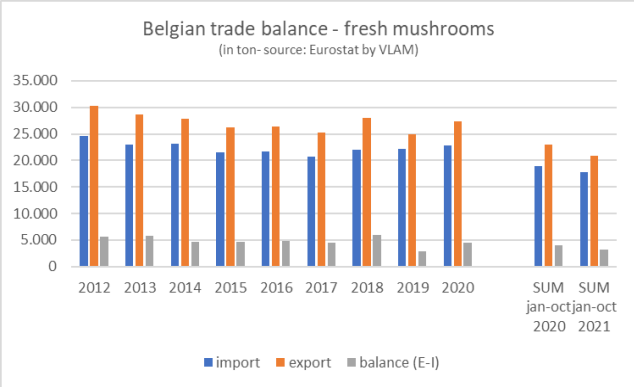
Consumption is higher amongst older consumers. The under 40's, especially the under 30's have lower levels of consumption than older cohorts. The under 40s are thus the key demographic to target.
Wasting less food, choose more local products, cooking more classic dishes by using pure ingredients are the top three intentions of the Belgian consumers. They are doing it already or want to do it more often in the future. Food loss is a hot topic for consumers. Furthermore, many Flemish people indicate that in the future they will opt more for artisanal and local products. And pay more attention to the nutritional value of products. Sustainability is a key issue for consumers, so the sustainable attributes of mushrooms need to be identified and highlighted.

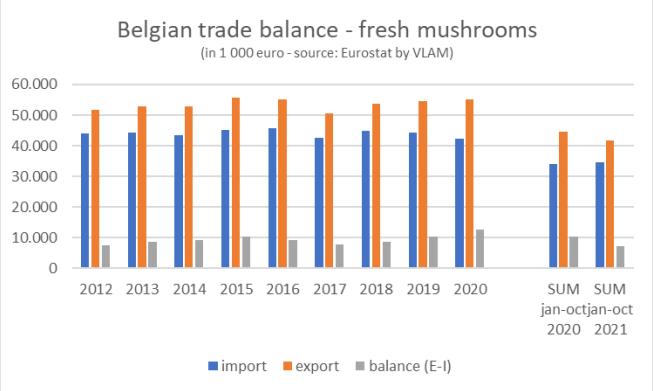
Cooking habits and millennials

On average, people cook themselves 5.6 times a week. When cooking, it takes about 37 minutes. The elderly and families with children usually spend longer in the kitchen than millennials, singles, and families without children. Vegetables are considered healthy and usually tasty, but the time-consuming preparation is an important barrier. Offering vegetables that are easy to prepare or already processed (like pre-cut) can lower that barrier. Mushrooms fit perfectly into this millennial expectation pattern (available in small quantities, no waste and easy to prepare).

Distribution

The Belgian market is self-sufficient for mushrooms with a little surplus. There is a lot of trade of mushrooms and the data also includes re-export. The trade Belgian balance shows in 2020 a surplus of 4 500 ton or 12.7 million euro.





Source: Eurostat by VLAM

Media Choices

Millennials use nearly completely online channels for recipe inspiration. For this reason, mainly online media would be the best for promotional activities.

France

- Population – 67 million
- Mushroom output 84,000 tonnes (for the fresh and processing market)
- Export Market – France does not export any *Agaricus bisporus* mushrooms

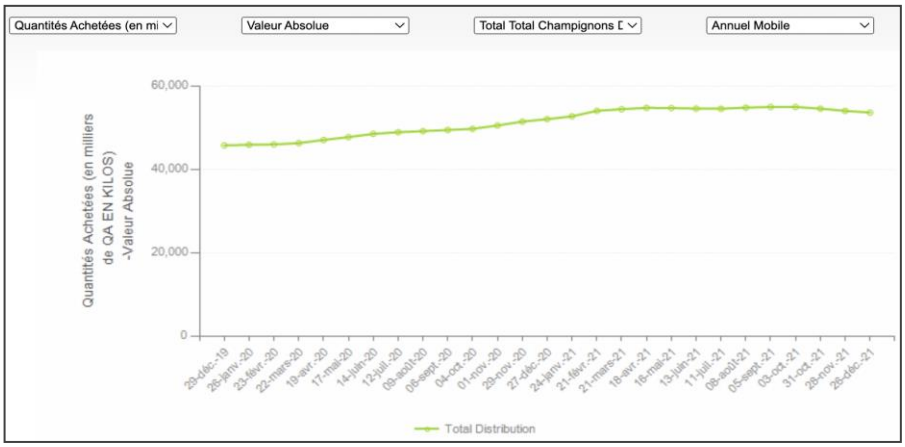
Production

The production in France does not meet the demand for fresh Agaricus mushrooms. About half of the mushrooms consumed in France are imported, especially from Poland and the Netherlands. France has historically had a major part of its mushroom production to be processed in canned mushrooms. But with the decline in the EU-27 of the canned mushroom market, the mushrooms produced for the processed market kept on decreasing this last decade. In 2020, for the first time, the French mushrooms production was shared 50%/50% between the fresh market and the processed market. The main mushroom sector challenges have been the access to labour and the growing costs in production (labour, packaging, energy).

Consumption

The French market is supplied for 50% by the French production, the remaining 50% come from Poland and the Netherlands.
The French demand for the home consumption is dynamic and implies imports of fresh Agaricus mushrooms from the EU-27 because the French production is not enough. Growers tackle with the difficulty to find and keep labour force to develop their production

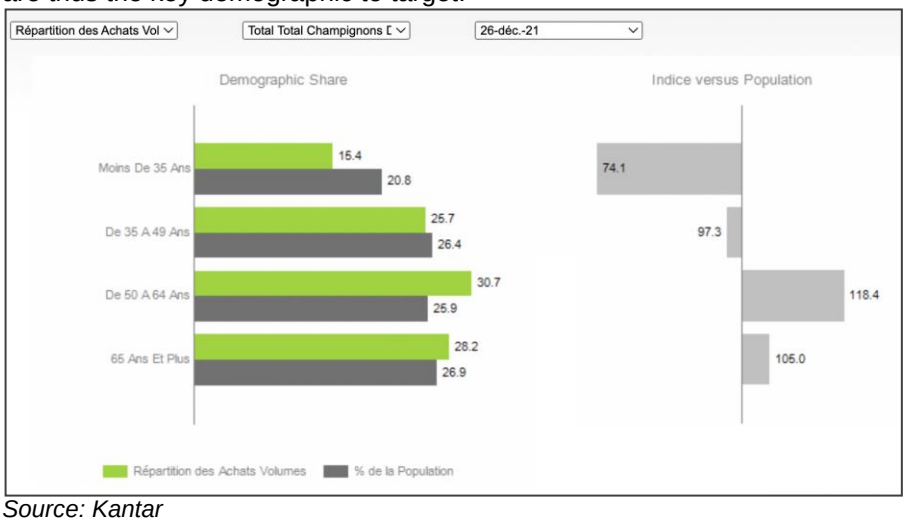
The retail market has performed well for the last two years, with the Covid 19 pandemic producing more working from home, and increased home cooking. The market has declined slightly as the economy reopens but remains higher than pre Covid times.
According to Kantar data, fresh Agaricus mushrooms are:
- mainly sold in retail: hyper and supermarkets represented 56 % of the volumes in 2020 They are present year-round in the fresh fruit and vegetables department. The third channel is: hard discount with about 15 %.
- mainly sold in punnets (70 % of the total volume sold for the home consumption). The punnets allow longer conservation and keep hygienic conditions without the possibility for the consumer to touch the mushrooms.



Source: Kantar

Shoppers

Consumption is higher amongst older consumers, who consume higher than their proportion of the population. The under 45's, especially the under 35's have lower levels of consumption than older cohorts. If this trend continues, it will result in the long term decline in the market. The under 45s are thus the key demographic to target.



Source: Kantar

Consumers

In France, consumption of fruits and vegetable decrease with new generations because of the simplification of the meals (starters and desserts are often suppressed from the meal) and the decrease of the time devoted to preparing meals (source CREDOC).

According to Kantar, consumers in 2022 wish to consume alternatively (no-waste attitude, ecommerce). They expect to be more environmentally friendly in their consumption.

The French market of fresh Agaricus mushrooms has been dynamic for the past 3 years. It has been boosted by the pandemic in 2020 (more meals at home) and has even increase in 2021.

It should continue to develop smoothly because Agaricus are easy to prepare, various to eat (raw, cooked) and have good nutritional values (rich in fibres, low in calories, rich in B vitamins).

	2019	2020	2021
Volumes of fresh Agaricus mushrooms bought for home consumption in ton	45 777	52 066	53 637
Evolution compared to the previous year	+3.6 %	+13.7 %	+ 3 %

Source : Kantar

Media Choices

Millennials use completely online channels for recipe inspiration. For this reason online media would be best for promotional activities, like Social Media, Social influencers, Search word advertising & Website.

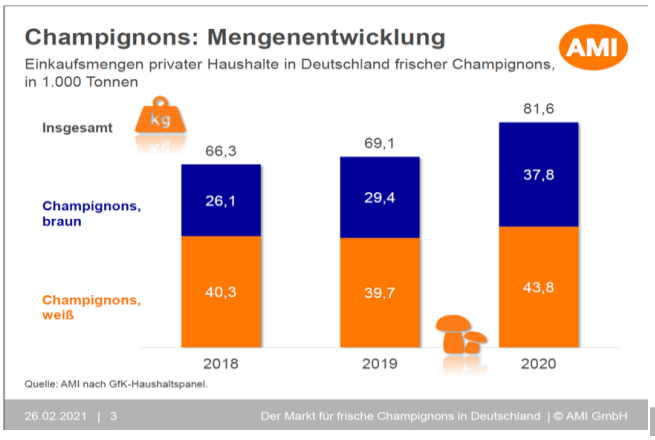
Germany

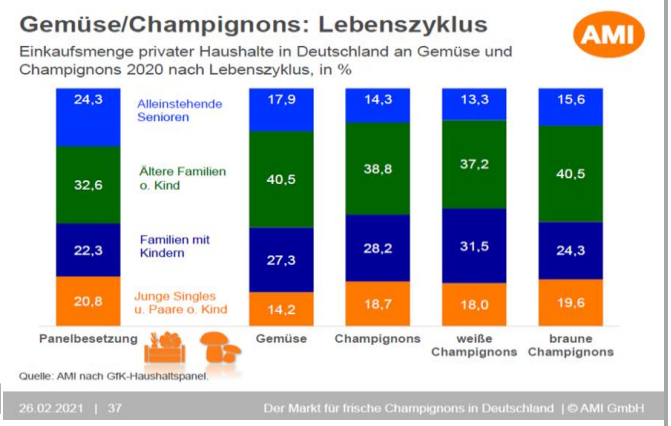
- Population 83.2 million inhabitants
- Mushroom output 90,050 Tonnes (for the fresh and processing market)

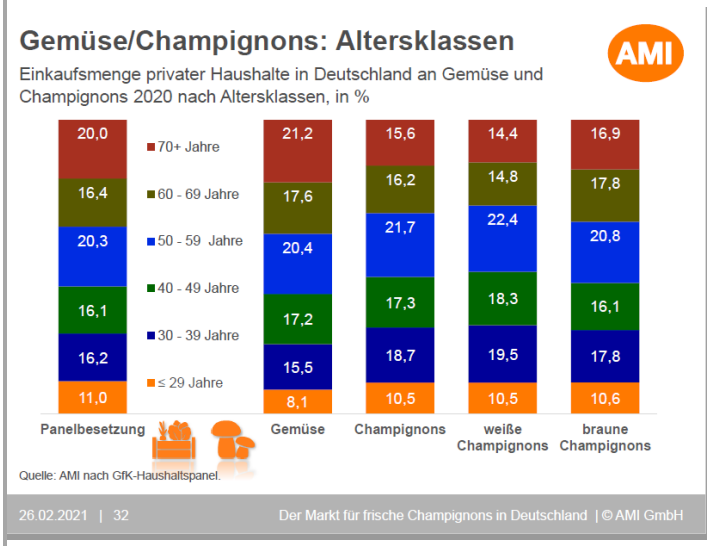
Consumption

In the Corona era, more time was spent on cooking. Mushrooms were able to profit from this, as can be seen from the production figures.

Young couples, singles and people without children are the least likely to buy mushrooms, so there is an opportunity to address this target group**.** In Germany, young consumers attach more importance to sustainability and environmental protection. Avoiding meat has become more important.







Media Choices

Millennials use completely online channels for recipe inspiration. For this reason, the following (online) media would be best for promotional activities Public Relations, Social Media, short video sequences, Social influencers, food-bloggers and the websites.

Hungary

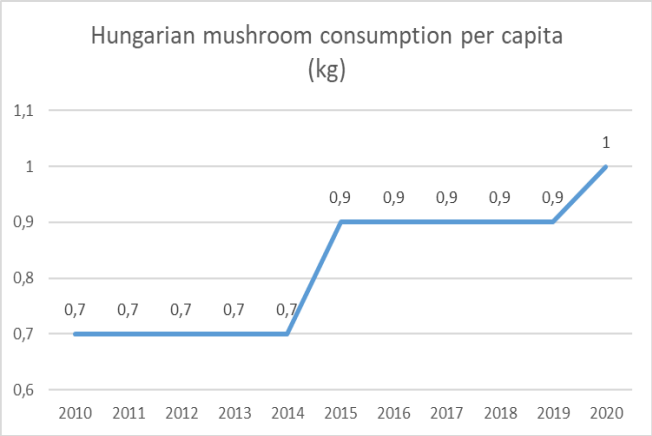
- Population: 9,9 million
- Mushroom output 21,000 tons (for the fresh and processing market)
- Fresh Export Market Austria, Slovenia, Slovakia

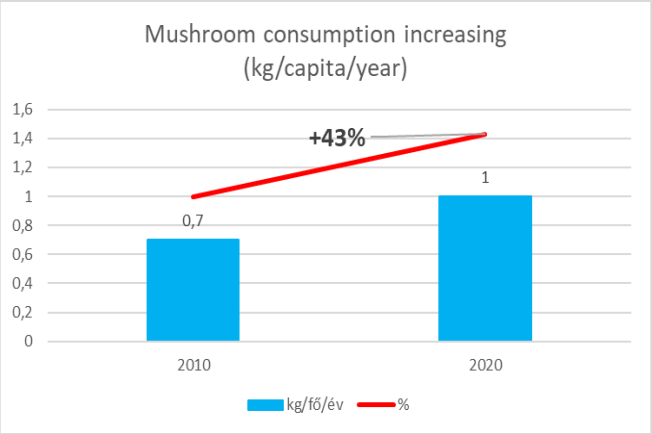
Production

90% of the mushrooms produced are button mushrooms, 7-8% are oyster mushrooms and the rest are exotic. Nearly 60% of the button mushroom are exported, 75% on the fresh market (on the neighbouring markets as Austria, Slovenia, Slovakia, Romania), 25% are canned (Italy, Austria). Oyster mushrooms are typically sold fresh to consumers both in Hungary and mainly for German market.

Exotic mushrooms are still available as fresh produce in smaller quantity on the market mostly from local cultivation (shiitake, king oyster mushroom, pioppino) and in minimal quantity from import (shiimeji, enoki).

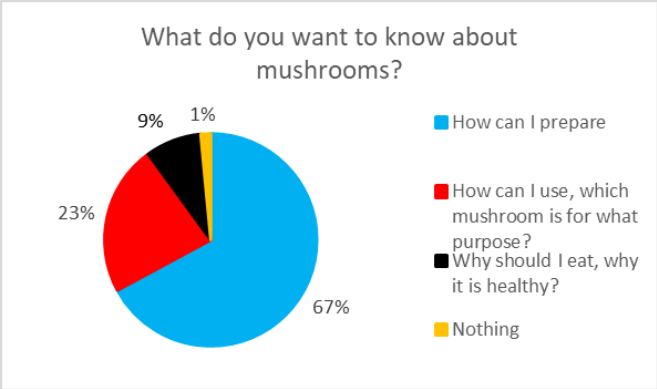
Consumption
Mushroom consumption increased by 43% for 10 years, in 2020 it was 1 kg/capita/year.

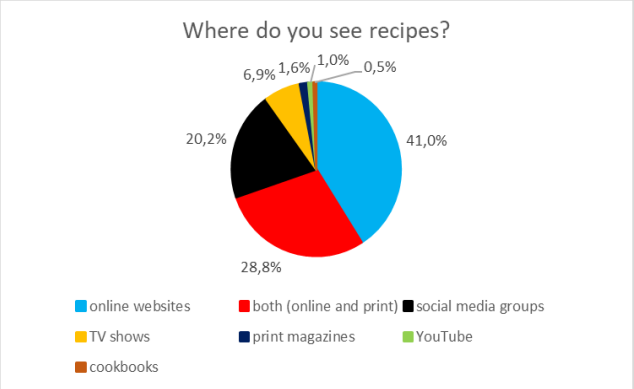




Source: Hungarian Central Statistical Office – www.ksh.hu

The Hungarian Mushroom Growers Association According made to a quantitative market research (online questionnaire) made by the Hungarian Mushroom Growers Association in March 2021 According to this, people would like to have more info how can the prepare mushrooms (67%). One third of them would like to know how they can use mushrooms and the function of the mushroom varieties (23%) and 9% would like to read or hear about the health benefits.
Regarding the sources of recipes, 41% seeks online recipes and almost 30% prefer both online and printed versions. There is a significant group (20%) who use social media groups to have recipes.





Source: Hungarian Mushroom Growers Association

Analysing the consumer attitudes made by Szent István University in 2020, it can be said that it was a quantitative online questionnaire from almost 1800 people (58%-woman, 42% man)
The statements used to measure attitudes about mushroom consumption, based on their correlation according to the responses, were organized into professional dimensions using principal component analysis. The following dimensions can be distinguished:

1. Healing effect and functionality:
   mushroom consumption is good for the immune system, mushrooms have an anti-tumour effect, a health protection effect, mushrooms are excellent ingredient for diets, mushrooms contain antiviral and antibacterial ingredients & mushrooms are low in calories
2. Enjoying mushroom consumption:
   wild mushrooms are more valuable than cultivated, can be prepared in a lot of ways & are safe to eat.
3. Complementary food:
   mushrooms are primarily a meat substitute food & are mostly part of holiday dishes.

Based on the examined dimensions, we separate three clusters:

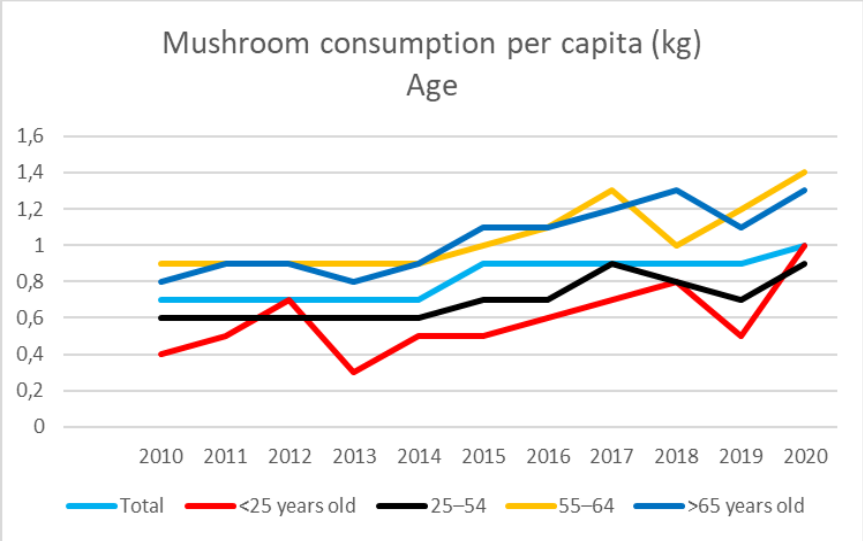
- Health-conscious mushroom consumers,
- Neutral mushroom consumers,
- Average mushroom consumers.

Among the health-conscious mushroom consumers, 31-40 years old (19,3%) and 41-50 years old (25,1%)

are significantly higher than the other two groups (neutral mushroom consumers, mushroom lovers). In the case of neutral mushroom consumers, the proportion of consumers aged 20-30 is significantly higher than in the other two clusters.
More consumption among people:

- with higher degree (bachelor or master)
- 55+ years old
- living in the capital or in big cities

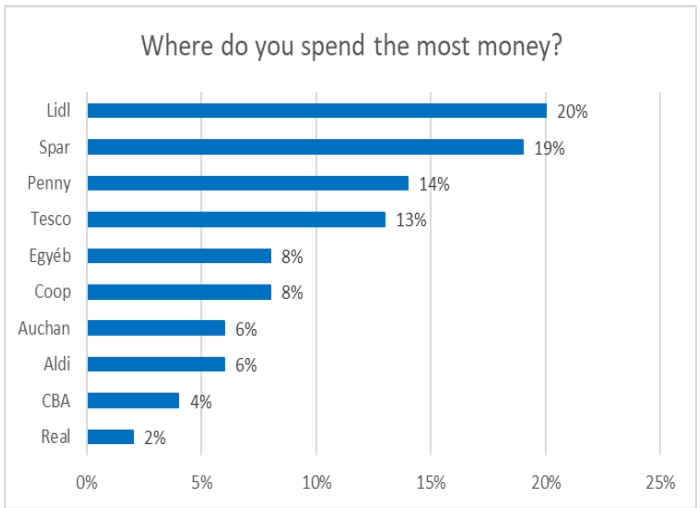
Mushroom consumption is higher among older people, the highest among 55-64 years old, it reaches 1,4 kg/capita and 1,3 kg/capita among the 65+. The higher degree the person has, the more mushroom he eats but single households consume more mushroom than bigger ones.

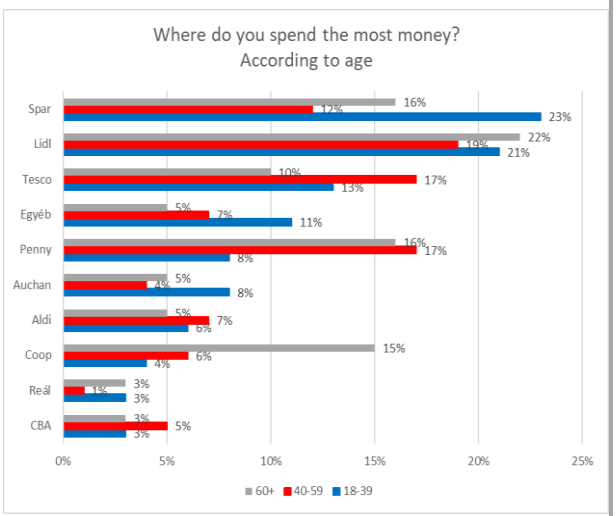


Source: Hungarian Central Statistical Office - www.ksh.hu

Distribution - wholesale and per retail channel

In Hungary there is no public market research available only for mushroom sales.
Hungarian customers visit the most frequently Lidl and Spar, followed by Tesco and Penny Market. For women, Lidl is the winner, with 22% being the favourite, but for men, Spar is the best with 22%.





Source: www.pulzus.eu

Spar also leads the youngest, with 23% most likely to shop there. Among 40–59-year-olds, Lidl leads: 19% of them have bought there recently. In this age group, a triple tie was born in the second place: Tesco, Penny and Spar were all chosen by 17% of them.

	2020	number of units	total revenue (M EUR)	change year-to-date (%)
1	LIDL	186	2,226	20,2%
2	SPAR	588	1,997	8,7%
3	TESCO	201	1,993	0,2%
4	COOP	4063	1,768	1,7%
5	CBA	1987	1,465	0,7%
6	REÁL	1189	1,157	0,3%
7	AUCHAN	24	1,142	7,1%
8	PENNY MARKET	226	1,008	14,1%
9	ALDI	147	0,965	19,0%
10	METRO	13		

Source: https://trademagazin.hu/hu/kereskedelmi-toplistak/

Media consumption trends in Hungary (June 2021)
Most of the Hungarian population is still informed by television, mainly by the elderly and the less educated, as well as those living in the village. More than the half of the population, younger respondents with higher education living in cities, find out on Internet news portals. Media consumption of generation Z is 5 hours and of Y is 4-5 hours a day.
Social media is an increasingly important field:

- Facebook is the most widely used social media site in Hungary. In Hungary, there were almost 5,5 million users of Facebook in 2019, while in 2021, almost 6,4 million people (66,6% of the population).
- Instagram has become popular among the younger and typically the wealthier people. In 2020, it has approx. 2,4 million (25,1% of the population). Although the number of Instagram users is smaller, the commitment exceeds the level of activity experienced in other social media uses.
- For both sites, the 25-34 age group is most actively involved in social media use. Those over the age of 35 are significantly less represented on Instagram compared to Facebook.
- YouTube has long been one of the most popular online platforms.
- TikTok became popular during the coronavirus crisis, so the advertisements placed here have a targeted effect on the young target audience.

Millennials use completely online channels for recipe inspiration, so (online) media would be best for promotional activities, like Public relations, Social Media, short video sequences, social influencers, food-bloggers, search word advertising & websites.

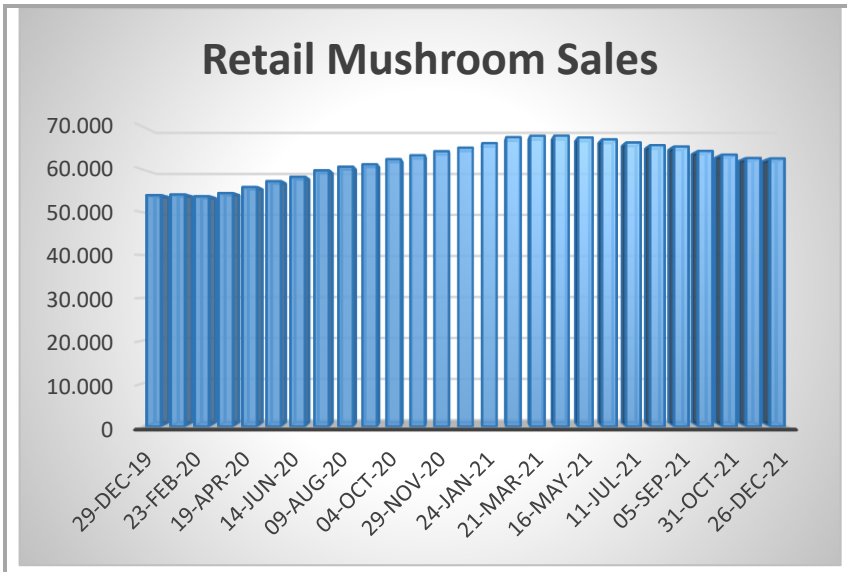
Ireland

Country Profile – Ireland

- Population – 4.9 million
- Mushroom output 69,000 tons (for the fresh and processing market)
- Export Market – 80% of mushrooms are exported to the UK

The UK is the most important market for the Irish mushroom industry. Irish producers have been exporting to the UK since the 1980's and supply about a third of the market. Irish producers are renowned for their high productivity, and the quality of their produce. Brexit has added costs for the Irish industry in terms of paperwork and more complicated logistics. The industry faces challenges right now with increases in growing costs, with energy, labour and packaging all on the rise, as is the case for most horticultural industries. Labour availability remains a concern for the industry.

Distribution
Irish growers nearly completely supply the Irish market.
The retail market has performed well for the last two years, with the Covid 19 pandemic producing more working from home, and increased home cooking. The market has declined slightly as the economy reopens but remains higher than pre Covid times.



Source Kantar World Panel

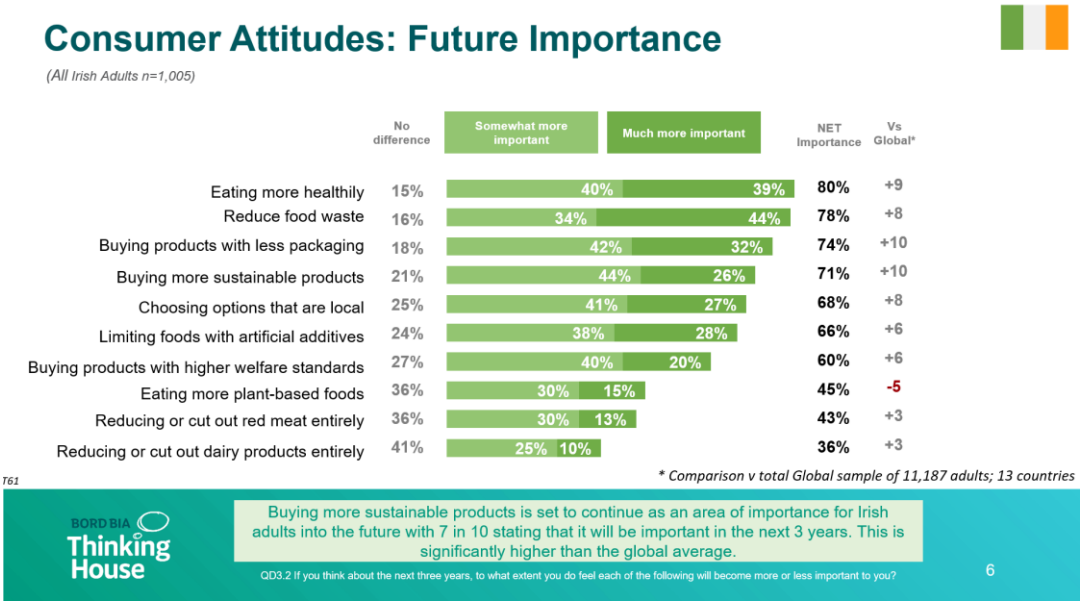
Shoppers

	Shopper Aged under 28	Shopper Aged 28-34	Shopper Aged 35-44	Shopper Aged 45-54	Shopper Aged 55-64	Shopper Aged 65+
Total vegetables	30,760	63,846	123,462	115,256	121,837	180,428
	4.84%	10.05%	19.42%	18.13%	19.17%	28.39%
Mushroom	2052.40	5,310	11,276	12,275	12,827	18,763
	3.28%	8.50%	18.04%	19.64%	20.52%	30.02%

Source Kantar World Panel

Consumption is higher amongst older consumers, who consume higher than their proportion of the population. The under 45's, especially the under 35's have lower levels of consumption than older cohorts. If this trend continues, it will result in the long-term decline in the market. The under 45s are the key demographic to target.

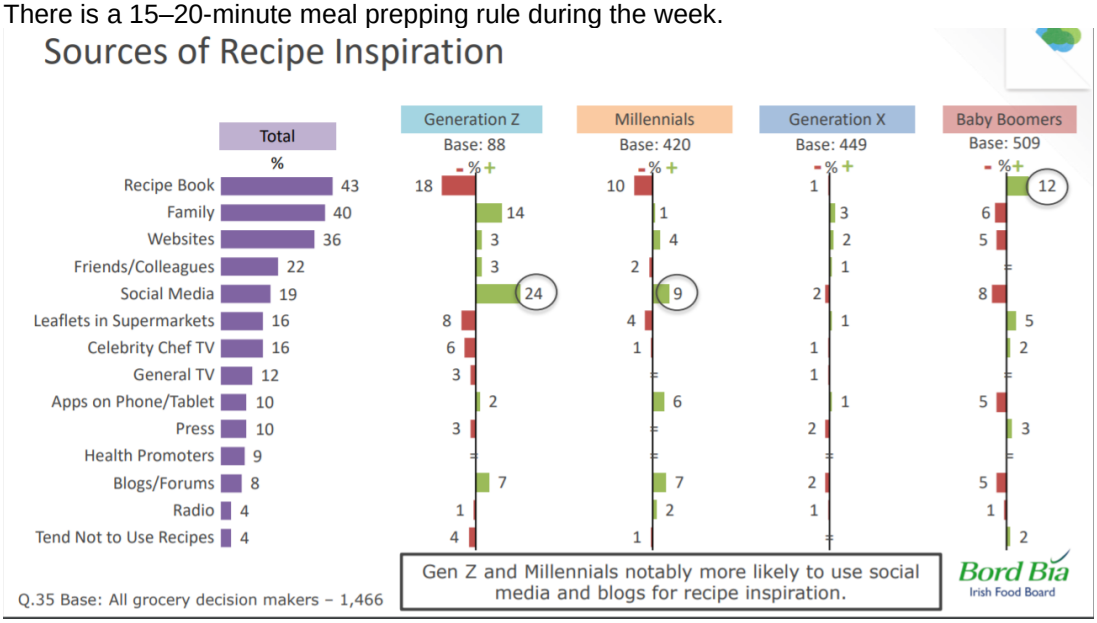
Consumers



Sustainability is a key issue for consumers, so the sustainable attributes of mushrooms need to be identified and highlighted.

Cooking habits of millennials

There is a 15–20-minute meal prepping rule during the week.



Media Choices

Millennials use nearly completely online channels for recipe inspiration. For this reason, the following (online) media would be best for promotional activities Public Relations, Social Media, Social influencers, Search word advertising & websites.

Italy

- Population - 60 million
- Mushroom production 62,000 tonnes (for the fresh and processing market)
- The Italians grower's serves 60% of the product consumed in the country. The rest comes from other European countries.

Italian growers are specialized in fresh products. The imported products are dedicated to the canning industry.

For some times, the market has been paying particular attention to the cultivated mushrooms Pleurotus Ostreatus, Shitake, and Pleurotus Eryngii, Agrocybe Aegerita.

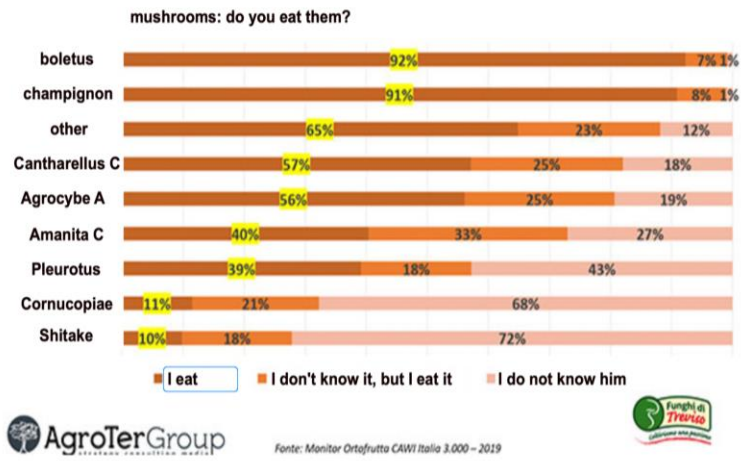
In the country, there is a need for more information on the product which, despite being available all year round, fails to be considered an essential element for the daily diet. Per capita consumption in Italy is half that of the rest of Northern Europe, both due to the lack of information and because the product is still considered seasonal when it is available all year round.

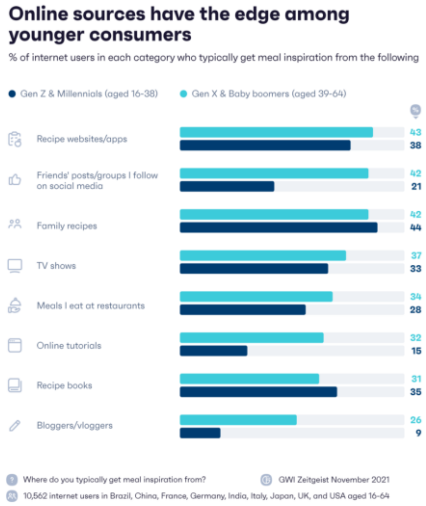
The sector also faces major challenges such as increasing the costs of transport, of growing/labour, of packaging, of energy & the costs of the raw material

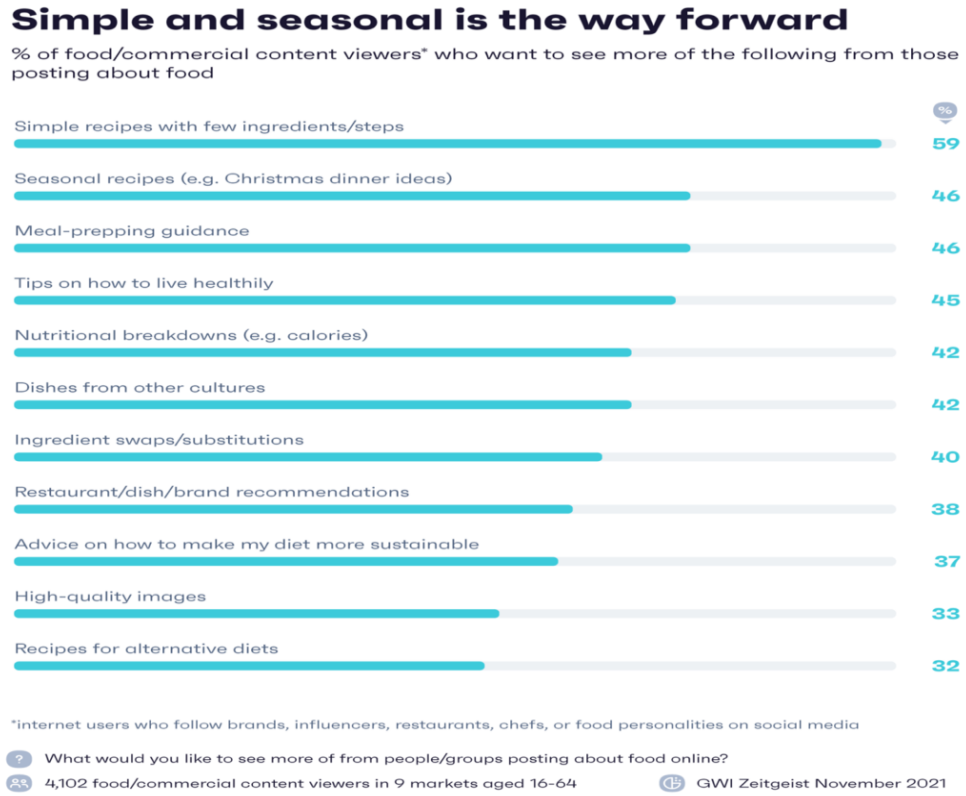
And to this is added the difficulty in negotiating for an increase of the selling prices.

Consumption

According to the CSO Italy Observatory, the average purchase of fruit and vegetables of each Italian family was about 229 kg, or almost 7 kg less than in the previous 12 months – mushroom near 1,9 Kg per capita. Also, in per capita terms, the year closes confirming the drop- in consumption, which went from 102 to 100 kg. In particular 48 kg for vegetables. The average expenditure per family also decreased (2%), from 466 in 2020 to 458 euros in 2021. In per capita terms, this item is equal to 199 euros (1%), (97 euros for vegetables). The consumption of mushrooms in Italy is stable to 1.2 Kilo/capita/year.







Distribution

The trend in domestic consumption of vegetables is reflected in the volumes managed within the distribution channels. Supermarkets (+ 5%), which drag large-scale distribution by increasing its relevance on the total of total national purchases, with a percentage that has gone from 69% to 72%, thus centralizing over 4.2 million tons (+ 1%). On the contrary, as mentioned, a minus sign for all other sources of supply: hypermarkets (-2%), discount stores (-1%) and small surfaces.

The latter, which had benefited from remarkably high increases during the lockdown months because they are preferred to larger surfaces, lost 33% in 2021. Heavy downturns also for traditional channels (-15%), street markets (-14%) and fruit vendors (-15%).

An analysis of the geographical distribution of fruit and vegetable consumption shows that about 33% of those responsible for purchasing are 65 years or older in the country. It is precisely within this group that 42% of the consumption of fresh fruit and vegetables is concentrated, followed by 20% of the shares of families with a purchasing manager aged between 55 and 64 years and those between 45 and 54 years. Finally, 13% of the volumes of fresh fruit and vegetables were purchased by people aged between 35 and 44, while the remaining 5% was purchased by people under 34 years of age.

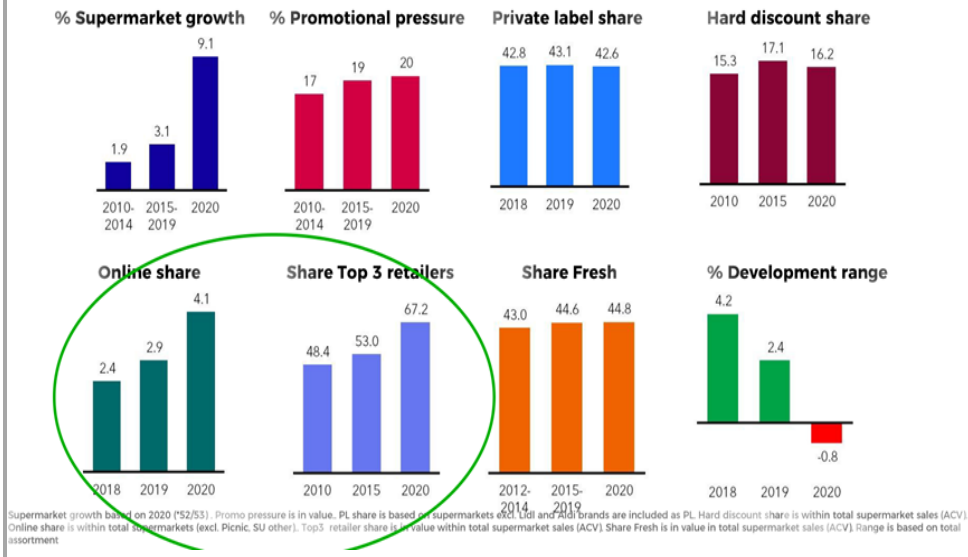
Media Choices
In Italy there is particular attention to specialized television media and sports events. In these two areas, in addition to those in indicated in generation Z, we can think and act to cover all age groups of both consumers and buyers.
Millennial target: they use completely online channels for recipe inspiration. For this reason the following (online) media would be best for promotional activities: Public relations, Social Media & influencers, search word advertising, websites &, Apps'.

Netherlands

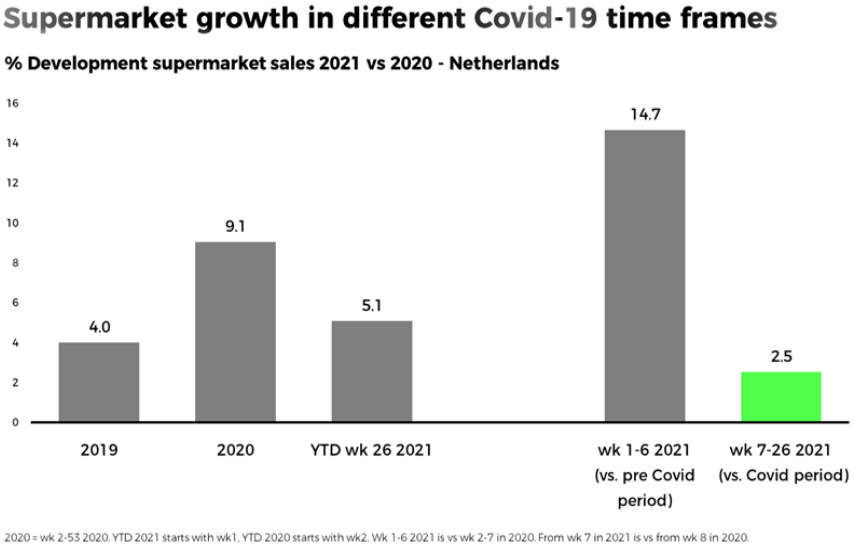
- Population – 17.4 million
- Mushroom output – 235.000 tonnes (150.000 for processing and 85.000 for the fresh market
- Export Market – 53% of mushrooms (for the fresh market) are exported to Germany, France, UK and some other countries

The "local for local" development in the most important export countries has a negative influence on the Dutch production and export of mushrooms during the time.
The expectation is a slight decrease in production for 2022, partly due to the strong cost price increase during 2021 (raw materials, energy, labour, packaging, transport) and the lack of business succession. At the end of 2021, the 2 largest retailers in the Netherlands have increased their prices by 15%. This is a start for the growers to also become a higher price. The biggest problem with pricing is competition between retailers.

Dashboard: developments in retail over time_ - Retail concentration increased 50%



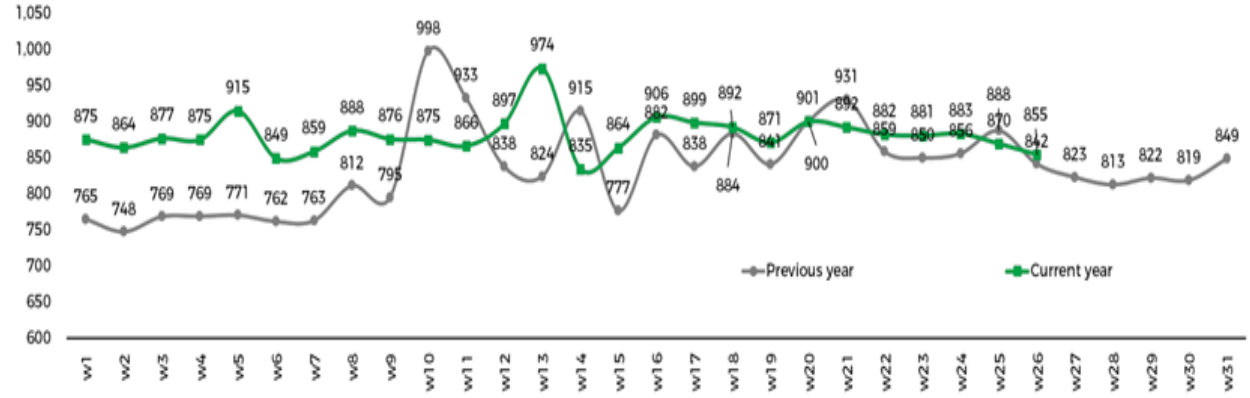
Supermarket growth based on 2020 (*52/53). Promo pressure is in value. PL share is based on supermarkets excl. Lidl and Aldi brands are included as PL. Hard discount share is within total supermarket sales (ACV). Online share is within total supermarkets (excl. Picnic, SU other). Top3 retailer share is in value within total supermarket sales (ACV). Share Fresh is in value in total supermarket sales (ACV). Range is based on total assortment



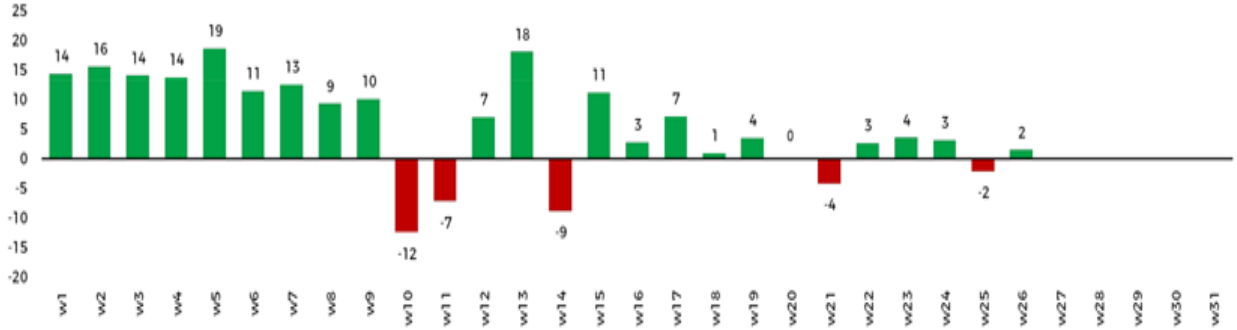
2020 = wk 2-53 2020. YTD 2021 starts with wk1, YTD 2020 starts with wk2. Wk 1-6 2021 is vs wk 2-7 in 2020. From wk 7 in 2021 is vs from wk 8 in 2020.

Information for EAN scanning in the retail

Supermarket sales per week (euro x mln) - Netherlands

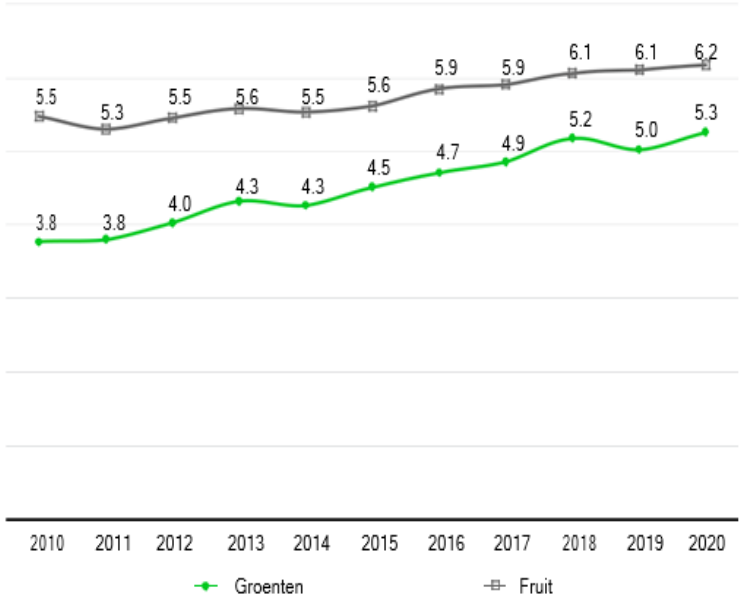


% Value development vs previous year



Growing Importance of fruit & vegetables

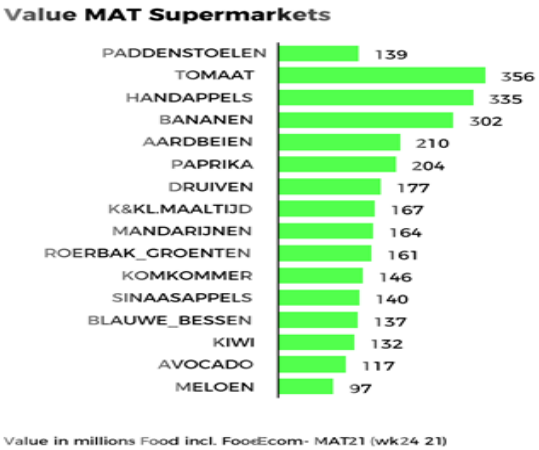
Value share in supermarket sales

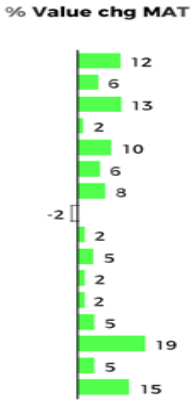


Key takes outs

- In 10 jaar tijd is de omzet van Groente & Fruit toegenomen ter grootte van de categorie Bier (€1.7Miljard)

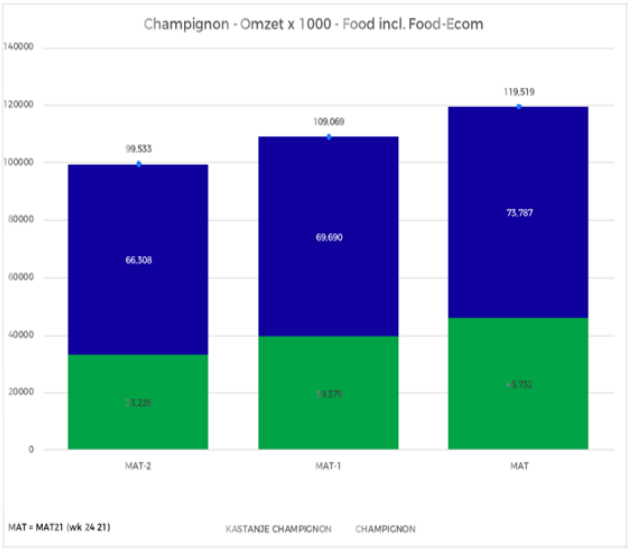
Mushrooms 2 years double digit turnover growth on yearly basis
Compared to other categories of fruit & vegetables.

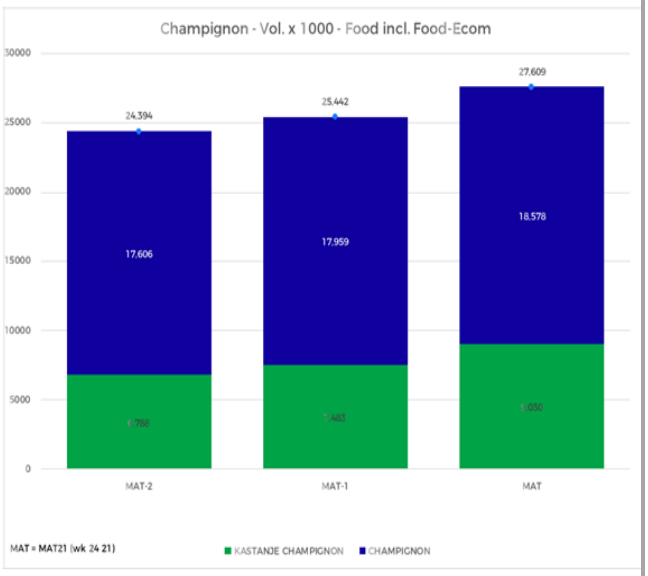




Chestnut vs button mushrooms

Green = Chesnutt mushroom - Blue = button mushroom





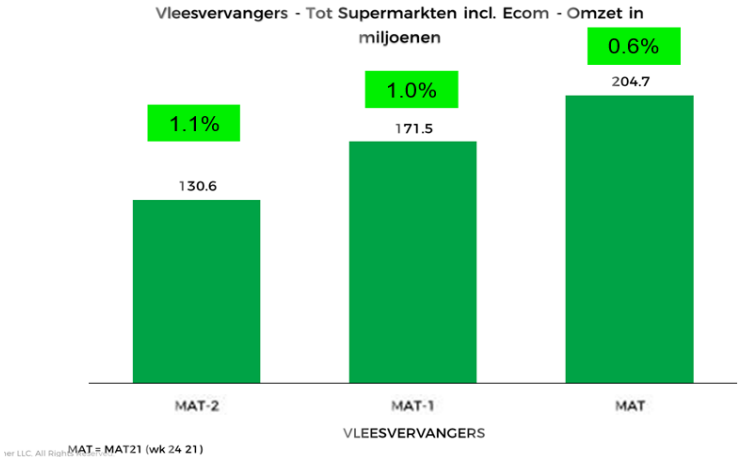
Average consumer price of mushrooms 250 grams increased higher than inflation over past 2 years

*Totaal van BIO & Regulier – ongesneden retailer mix en promo

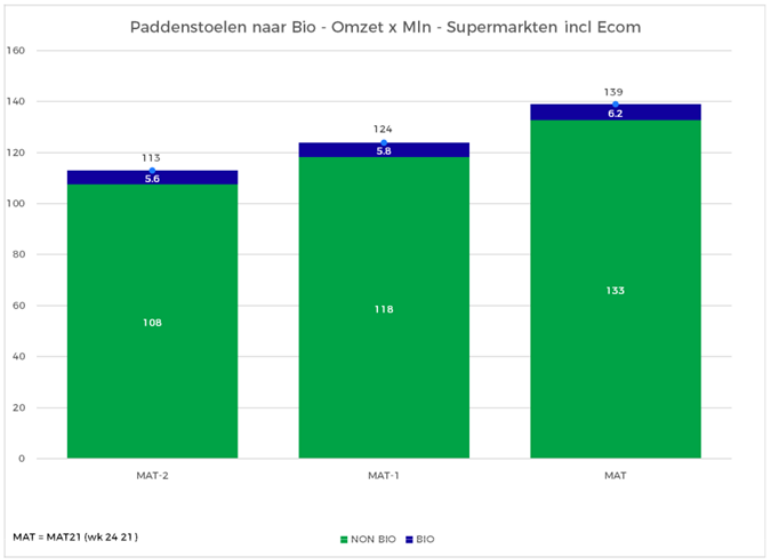


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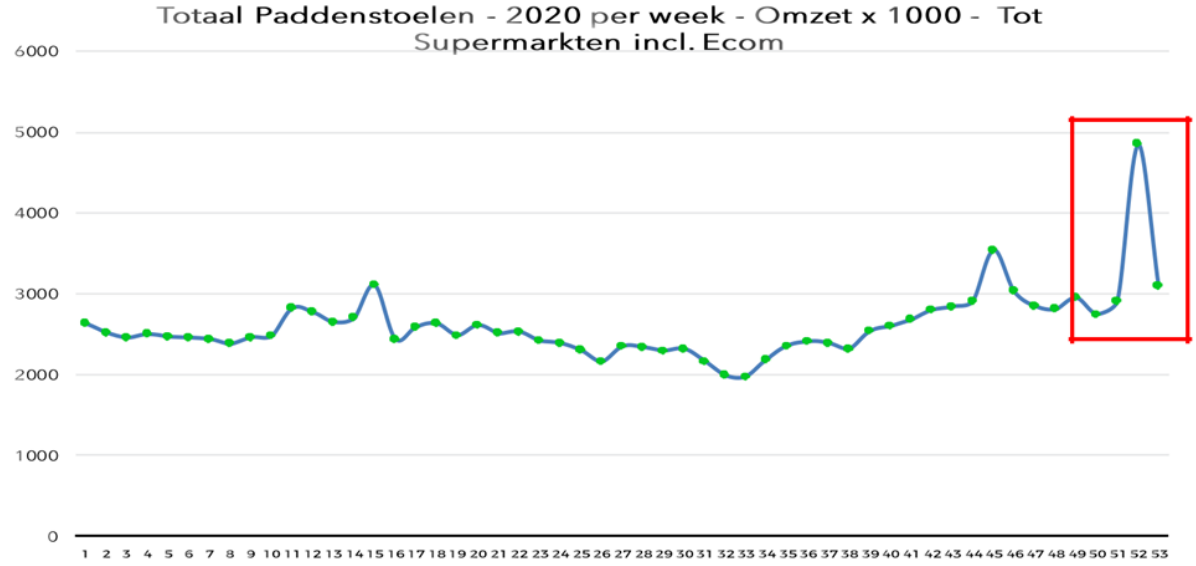
Role of mushrooms as a substitute for meat is still limited



Biological production in relation to regular production



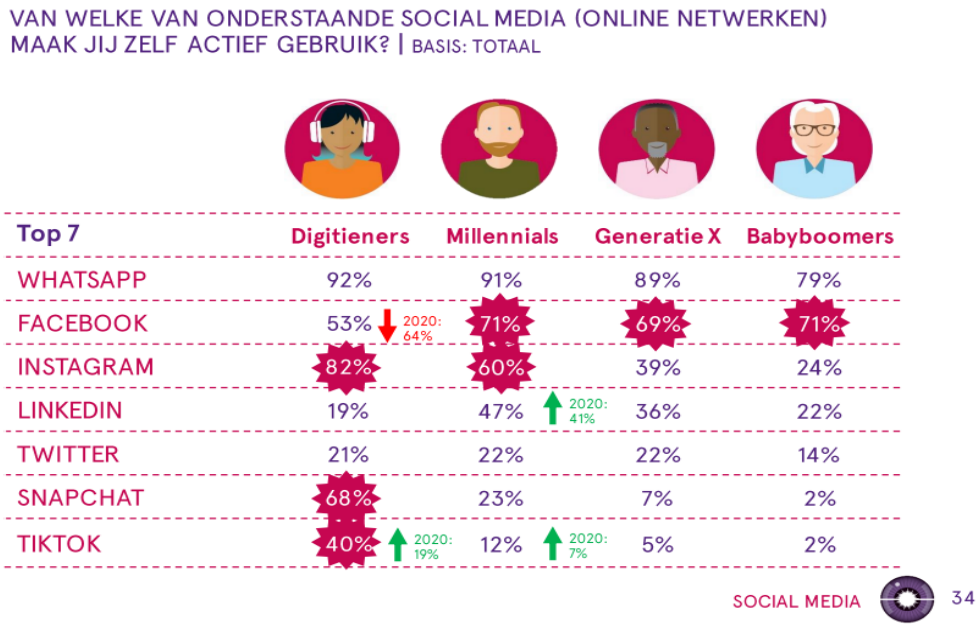
Mushrooms sales per week in 2020



Source of all graphics: Nielsen

Media choices Netherlands

The usage of the social media networks actively in the Netherlands:



Source: Ruigrok Net Panel WHO 2021

Poland

Country Profile – Poland

- Population 38 million
- Mushroom output 300,000+ tonnes (for the fresh and processing market)
- Export Market – over 70% of mushrooms are exported. Almost 90% of the exports go to other EU countries.

Production

Poland is the biggest mushroom producer in Europe. The steady growth in production volume observed in the past 15 years, has plateaued in the last two, three years. Currently, the biggest challenges are rapidly increasing costs of production and labour availability.

The dominant position of the Polish mushroom has been achieved by exceptional quality, flexibility and competitive pricing offered to clients across Europe by, mostly family owned, mushroom farms. Majority of the production is exported. Following the Russian embargo on mushroom imports, introduced in 2014, 60 000 tonnes of Polish mushrooms had to be redirected from that market to other European countries. It was a seismic shift, but with significant effort the whole sector managed to pull through.

There are a lot of modern facilities designed and built from the ground up in order to meet strict quality and food safety requirements of importing countries. There is a sizeable number of older style mushroom farms providing the domestic market, but they are being replaced by newly built, large scale facilities at an increasing rate. Considering the export volume and domestic consumption estimates, overall production hovers around the 300,000 tons. The average pricing for the producer supplying the fresh market in the last 6 years would be as follows:

- 2016 – 5,05 PLN
- 2017 – 4,98 PLN
- 2018 – 5,49 PLN
- 2019 – 5,75 PLN
- 2020 – 5,57 PLN
- 2021 – 6,84 PLN *Source: SBGU, Instytut Ekonomiki Rolnictwa I Gospodarki Zywnosciowej, estimates*

Import/Export

Export –official government data for fresh Agaricus export for 2021 is 218 000 tons (source: GUS – Main Statistical Office). Top importers of Polish mushrooms *(Source: Eurostat 2000*):

1. UK (51 000 tonnes) 2. Germany (49 000 tonnes) 3. France (30 000 tonnes)

There is a growing push for healthy unprocessed produce among the young population in larger cities. However, the traditional homecooked meal for the whole family, usually a responsibility of the head of the house, is still a feature in many households.

There is no significant import of fresh Agaricus into Poland.

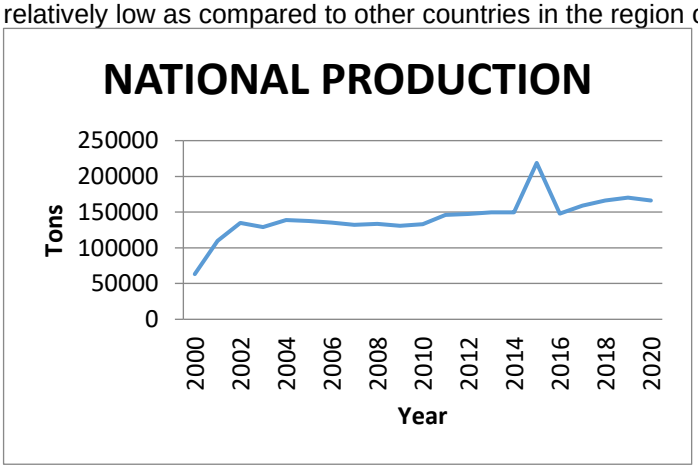
Consumption
In comparison to other European countries annual per capita consumption is low – about 2-2,5 kg. Half of what it is in countries importing Polish mushrooms.
There is no detailed info on consumption. Before the pandemic it remained on a stable but not extremely important level. One should expect that, similarly to other EU countries, the last two years saw a slight increase in demand due to increased home cooking and dietary awareness during the pandemic. Due to lack of domestic promotion programmes the expected trendline is flat.
There is a lasting and cultivated tradition of wild mushroom picking. Some government sources estimate wild mushroom market at 100 000 tonnes per year, but it is hard to verify that number as the practice is not monitored in any methodical way and is subject to significant seasonal fluctuations.

Distribution
Dominant position of the retail chains, even large scale producers have trouble negotiating fair prices. Ever smaller quantities are sold on local markets.

Spain

- Population – 47 million
- Mushroom output 166,000 tons (for the fresh and processing market)

Production
Spain was one of the largest producers of cultivated mushrooms with a production level of 1.97 thousand tons in 2019, mayorly produced in La Manchuela and La Rioja regions. Neofungi is the largest mushroom producer in Spain with more than 50% market share. The consumption of regular mushrooms in the country is growing at a slower rate than other mushrooms like shiitake and oyster. The consumption in the country is relatively low as compared to other countries in the region owing to the smaller consumer base.



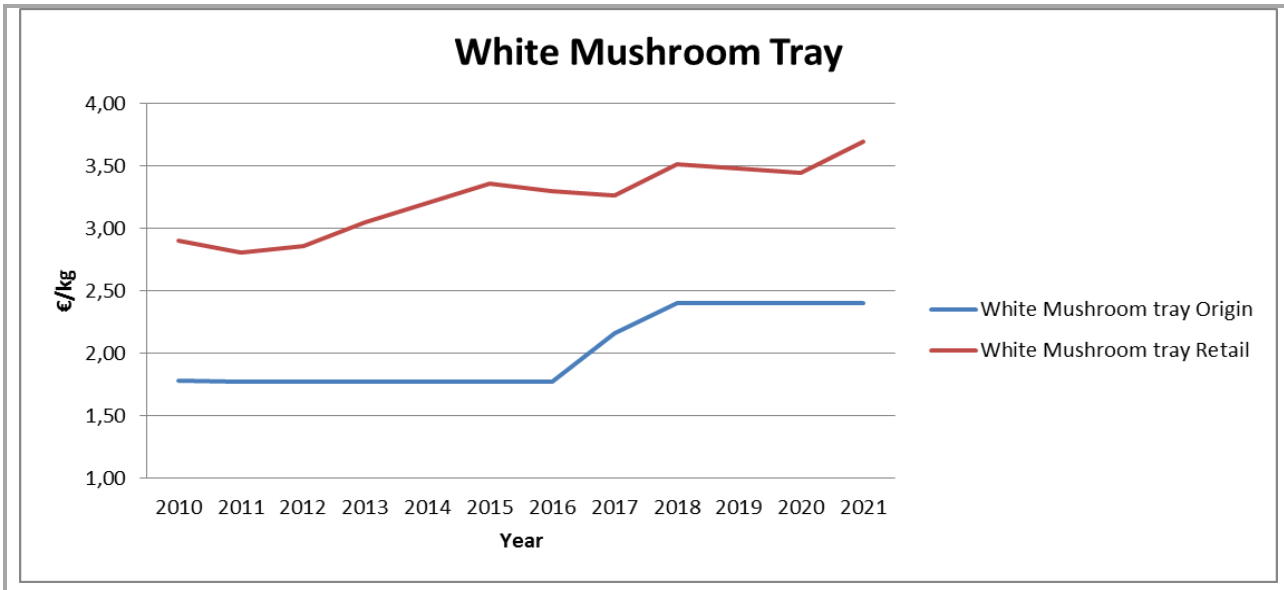
Graphic: source FAOSTAT

Prices
The following prices are plaid to the grower since 2021 in €/kg.:

	White Mushroom tray		White Mushroom Bulk		Pleurotus tray		Pleurotus bulk		Shiitake	
	Origin	Retail	Origin	Retail	Origin	Retail	Origin	Retail	Origin	Retail
2010	1,78	2,90	1,06	3,31						
2011	1,77	2,81	1,14	3,28						
2012	1,77	2,86	1,23	3,14						
2013	1,77	3,05	1,18	3,27	2,60	6,93	2,16	4,47		
2014	1,77	3,20	1,23	3,66	2,60	6,29	1,74	5,37	5,00	10,87
2015	1,78	3,36	1,20	3,40	2,60	5,76	2,01	4,35	5,00	10,76
2016	1,77	3,30	1,22	3,22	2,60	5,85	2,11	4,48	4,62	10,51
2017	2,16	3,27	1,61	3,22	2,60	5,88	2,12	4,48	4,69	10,14
2018	2,40	3,51	1,90	3,39	2,60	6,05	2,07	4,43	4,50	10,84
2019	2,40	3,48	1,90	3,48	2,60	6,10	1,99	4,62	4,33	10,71
2020	2,40	3,45	2,12	3,77	2,60	6,60	2,18	4,87	4,00	10,50
2021	2,40	3,70	2,20	3,50	2,70	6,36	2,29	4,33	4,04	10,95

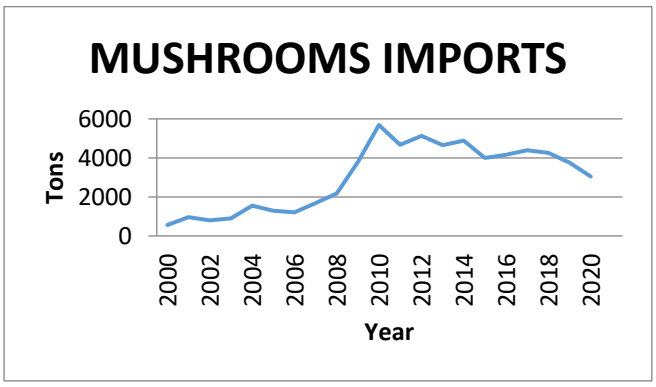
Source: Observatory of Agricultura prices of La Rioja

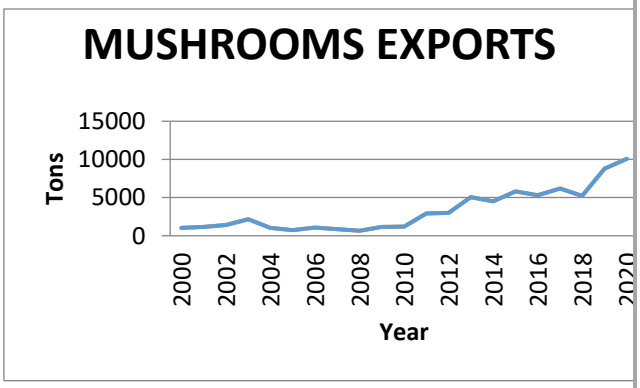
The following prices which are paid – since 2021 – by the consumer:



Import & export

The most popular type of mushroom in Spain is *Agaricus bisporus*, followed by *Pleurotus* genus, together contributing to around 70% of the total consumption in the country. The annual per capita consumption of Spain is approximately 2 kg as of 2019 as compared to the global annual average per capita consumption that stands at 3 kg, which offers scope for more market penetration in Spain over the forecast period.





Graphics: source FAOSTAT

Consumption

Spain has a substantial vegan population, which is significantly increasing year on year. This rapid increase in the vegan or meat-refraining population is expected to switch to products that are of plant origin and rich in protein, thereby favoring the growth of mushroom market.

Europe is one of the worst-hit regions by the COVID-19 pandemic. Countries such as the UK, Spain, France, and Italy were badly hit by the pandemic. The pandemic has largely affected the imports of mushrooms from countries like China, Peru, and Chile. The local demand from hotels, restaurants, and other food chains was largely impacted due to the lockdown in March, April, May of 2020 forced them to close. However, the retail and household consumption remained strong as consumers increasingly preferred immunity-boosting food products. The demand for such functional foods in the region was increased by 56% in 2020, which is expected to benefit the mushroom market over the forecast period.

The consumption of mushrooms is expected to grow over the years owing to the increasing awareness among the consumers related to the benefits such as high nutrition value, low-calorie content, and medicinal properties. Increasing investments in the pharmaceutical sector are expected to fuel the demand for mushrooms over the forecast period as the popularity of natural ingredients-based products is on the rise. Spain has a substantial vegan population, which is significantly increasing year on year. This rapid increase in the vegan or meat-refraining population is expected to switch to products that are of plant origin and rich in protein, thereby favoring the growth of mushroom market.



Graphic: source FAOSTAT

Media Choices Spain

The millennials culinary habits are quite different than older generations. Millennials use more their smartphones and tablets in the kitchen, they try to be more creative and taste new flavours. For these reasons, it is important have the correct channel to have a chance with that generation. And these channels are social media (Twitter, Instagram), YouTube, influencers, webs, etc.

Overall conclusions

The European *Agaricus* mushroom production which amounts to 1,063 700 Mtons in 2020 has long succeeded in meeting the demand for the fresh market (only 4% of the EU-27 imports comes from third countries which is the UK). Mushroom growing is present in a large part of Member States and provides direct employment to many people in rural areas because mushrooms are picked manually for the fresh market. The European cultivated mushrooms sector represents around 2 400 mushrooms growers and 47 000 persons directly employed.

The apparent consumption of fresh *Agaricus* mushroom is well oriented because of the healthy characteristics of mushrooms. They are source of fibres, group B vitamins and potassium. They have a relatively high rate of protein compare with vegetables which can be an interesting fact when aiming to a less meat-based diet. Also, thanks to its praticity, *Agaricus* mushroom can be eaten either raw or cooked in a various range of ways (alone or with other vegetables).

However younger generations tend to eat less mushrooms and there is also a part of the consumers who are not sufficiently aware of all the benefits of mushroom in terms of sustainability and healthy diet. Besides, the mushroom sector faces rising costs especially in energy and so needs for increasing sales of mushrooms to cope with this.

SWOT analysis - per target country & total

Out of the market analysis & horticultural sector developments the following SWOT-analysis can be made:

Strengths	Weaknesses
Belgium	**Belgium**
Good image: healthy, natural and fresh.	Taste, not everyone likes mushrooms.
Fits in with modern, nutritional food: low in calories, vitamins and high in fibre.	Perishability (decrease in quality in the distribution chain, especially if many intermediaries).
Eating fresh vegetables in general and mushrooms are recommended by prescribers (doctors, dietitians and paediatricians).	
Popular with a broad target group.	
High quality image (safety, traceability, food quality and organoleptic value and production method with	

respect for the environment).	
Good supply and distribution. Sufficient availability all year round.	
Strong knowledge in the field of cultivation, storage and commercialization in Belgium.	
France	**France**
Increase of consumption since the pandemic.	Production not enough to meet the demand (so EU import).
Mushrooms have many assets to be better known by the consumers: easy to eat, to prepare, tasty, rich in fibres and vitamins B.	
Germany	**Germany**
German cultivated mushroom growers are fresh & healthy and ensure a secure supply for the population	Germany does not have its own training in cultivated mushroom growing.
German mushrooms stand for short transport distances to the consumer.	Short shelf life of the products, high water content
"Healthy mushrooms" is the association's own advertising campaign for German mushrooms	Little knowledge of mushroom cultivation among the population and in politics
There is no use of pesticides	Low availability of harvest workers
Wide availability in the food retail trade	Peat use is poorly regarded politically and socially
Positive megatrends for cultivated mushroom producers: regionality, healthy eating, climate protection, sustainability and meat avoidance	Germany has hardly any scientific structures of its own for cultivating mushrooms
Product is produced on residual materials from agriculture, champost is recycled, positive properties for the soil	Comparatively high production costs of Energy, inputs and high minimum wage, CO2 pricing combined with high bureaucracy due to various requirements and regulations
Hungary	**Hungary**
With the Dutch-style technology, high yields and yield averages are possible in Hungary.	High export dependence due to higher demand for mushrooms in the surrounding countries.
Yield averages can be maintained independently of external weather factors.	Multinational companies can provide higher wages to physical workers, making it difficult to retain labour.
Expansion towards other western and southern target countries, where the technology of mushroom cultivation is not yet widespread.	Production is a process that requires a lot of physical labour so labour shortages can easily be overwhelmed.
	There is no training, education in mushroom growing technology in Hungary.
	The sector requires high investment capital.
	Mushroom consumption per capita is still quite low.
Ireland	**Ireland**
Irish mushroom industry capability for consistent supply of fresh mushrooms.	Ireland relies on the UK market for 80% of their sales.
Irish mushrooms produced under sustainable horticultural assurance scheme.	Limited own promotion resources given the scale of the markets.
Irish companies have strong links with Irish retailers &supply most of Irish market.	Irish Mushroom producers' viability with rising costs
Bord Bia experience in promotion campaigns.	
Italy	**Italy**
Ability of Italian mushroom producers to provide a constant supply of fresh mushrooms to the market throughout the year.	Limited resources for own promotion given the size of the market.
Italian organic mushrooms produced.	Italy relies on the Italian market for 90% of sales.
Italy is an easy country to serve, and the freshness is kept constant • Italian companies have strong traditional links with European retailers.	The first market for food communication is television but it is expensive for producers.
Italy has strong experiences in product certification with experiences (like "Funghi Italiani" & "Fungo Italiano Cerificato"). Brands that have developed promotional campaigns on domestic markets.	Difficulty of producers in making the product and its use in the kitchen known.
	Difficulty of mushroom producers in raising prices.
	Difficulty of mushroom producers to increase consumption.

Netherlands	**Netherlands**
Dutch mushroom industry capability for consistent supply of fresh and processed mushrooms.	Price pressure is high in The Netherlands.
Dutch mushrooms produced under sustainable horticultural scheme.	Availability of workers is a problem.
NL and Northwest Europe are geographically close, which means the market is easy to service and freshness is maintained.	Dutch Mushroom producers' viability with rising costs.
Logistics in Netherlands are very well developed. There for the transport to other countries is easy.	
Poland	**Poland**
Extremely high quality of the mushrooms produced.	Strong internal competition driving the prices down.
Modern production infrastructure.	Export dependent.
Flexibility and experience of producers in meeting the demands of the market.	Lack of domestic regulations on fair producer-retailer relations makes negotiations with retail chains extremely difficult.
Strong Polish logistics sector enabling supply all over Europe.	Few mushroom growers are part of production groups enabling intermediaries to reduce the profit margins for producers.
Low labour costs in comparison to other European countries.	Low awareness of our strong position in Europe among the Polish customers.
Experience in exporting to a large variety of international markets.	Structured domestic promotion and marketing of mushrooms is weak to non-existent.
Spain	**Spain**
Short production chain composters - growers.	Obsolete cultivation facilities.
Deep knowledge of mushroom cultivation.	Crops base on phase II still exist.
Strong commercialization channels.	Low generational renewal.
Production under circular economy.	Sector with few own resources.
Increasing mushroom consumption in Spain.	Strong investments for the production of mushrooms.
Job-generating product. The sector needs a lot of workers for harvesting.	Viability of the farms of Spanish producers due to the increase in costs and the difficulty in transmitting this increase to customers.
Sustainable product.	
Opportunities	**Threats**
Belgium	**Belgium**
Growing awareness of a healthy lifestyle.	Decreasing interest among young people in products with an older image, such as mushrooms.
Fresh product area is a crowd puller for wholesale distribution.	Lack of time consumer, both when purchasing and preparing food, resulting in competition from convenience (preserves, ready meals).
Possibility in 'out of home', channel that grows again.	
Responding to the convenience trend with mushrooms, e.g., no or little cleaning and loss, easy to prepare.	
France	**France**
Consumers could eat even more fresh mushrooms because of their healthy image and the rising trend to eat less meat.	Decrease of the French production for the benefits of even more imports from EU27 than today.
The penetration rate is 67 %: there is place for improvement compared to the penetration rate of vegetables (96 %).	Younger consumers in France eat less mushrooms than older age groups.
Germany	**Germany**
There is a demand for sustainably produced and regional mushrooms.	Rising costs due to Ukraine crisis and Corona pandemic.
Germany is the most populous country in Europe with 83.2 million inhabitants.	German mushrooms can hardly meet the need and demand for regional mushrooms.
High standard of living: GE in top 3 countries in terms of average gross monthly earnings.	Structural change is progressing, and only large producers are profiting.
Consumption of mushrooms households increased massively from 66 300 t in 2018 to 81 600 t in 2020.	Mushrooms from other countries displace regionally produced mushrooms due to price pressure.

German production is not sufficient to meet demand, so mushroom imports are necessary.	
Greater accessibility from the emerging target group of people who care about sustainability and healthy eating or meat substitutes.	
Potential to appeal to younger consumers and secure long-term market growth.	
Hungary	**Hungary**
Demands in Hungary can be increased, with the proliferation of vegan lifestyles/ foods, the role of mushrooms and prepared/processed dishes containing mushrooms.	Rising energy prices are leading to higher production costs.
	Fierce competition of the Polish mushroom industry.
An increasing consumption trend can be observed in Hungarian households.	
Creating new products for young people (varieties and flavors).	
Main retail chains are open to new of mushroom products and the widening of the product range.	
There are high demands in the western markets, there are still growing demand in Austria, Germany and Italy.	
Ireland	**Ireland**
Ireland top 10 monthly income in Europe.	Younger consumers in Ireland eat less mushrooms than older age groups.
Penetration is high for fresh mushrooms – 80% in Ireland versus 65% in Germany.	Rising costs for Irish producers due to customs documentation, inspection delays.
Production in some targets markets is not sufficient to meet demand, so mushroom imports are needed.	Retail and some consumer preference for British mushrooms.
There is a demand for sustainably produced mushrooms in Europe.	Potential for Irish/European producers to switch production to the UK, with loss of European jobs and revenue.
The most important home market is Ireland, so easy to service and freshness is maintained.	
Potential to highlight the quality and environmental credentials of Irish/EU mushrooms	
Meat substitution (full/partial) is increasingly popular, and mushrooms can play a role here in Ireland.	
Healthy eating is high on the agenda in Ireland and mushrooms have good health credentials.	
Potential to engage with younger consumers and ensure long term market growth.	
Italy	**Italy**
Italy has a large population (6o million habitants).	Rising costs of raw materials.
Has a good spending power and is among the top 10 monthly incomes in Europe?	European Economic Situation (Ukraine).
Consumption is prevalent for fresh mushrooms, but it is also good for preserved ones.	Younger consumers in Italy eat fewer mushrooms than older age groups because they do not know them.
There is room for growth.	Too different packaging in large distributions.
Production in Italy is not sufficient to satisfy the demand, therefore imports of mushrooms are necessary especially for the industry's food.	High packaging costs.
Italian growers offer jobs and are recruiting staff across the country.	Generational transitions - risk of company closure, with loss of jobs and European revenues.
Potential to highlight the quality and environmental credentials of Italian / EU mushrooms.	
Meat substitution (full or partial) is increasingly popular, and mushrooms can play a role in Italy.	
Healthy eating is at the top of the Italian agenda and mushrooms have good health credentials.	

Ability to engage younger consumers and ensure long-term market growth.	
Netherlands	**Netherlands**
Healthy food is becoming increasingly important in the whole of the EU.	Younger consumers in the EU and The Netherlands eat less mushrooms than older age groups.
Consumption per capita is rising.	Rising costs due to higher electricity costs and labour costs.
There is a demand for sustainably produced mushrooms in the EU.	Retail and some consumer preference in the EU for local mushrooms (is a problem for Dutch export.
Meat substitution (full or partial) is increasingly popular, and mushrooms can play a role here in The Netherlands and the EU.	
Healthy eating is high on the EU agenda & NL; mushrooms have good health credentials.	
Poland	**Poland**
Low domestic consumption (2-2,5 kg per person per year) leaves a lot of room for internal growth.	Traditional cooking and eating habits are 'growing old.' New consumers need fresh marketing approach
Underlining the sustainable nature of mushroom production.	Rising costs (labour, energy, raw materials).
Visible shift in consumer practices away from highly processed towards fresh and unprocessed food.	Labour availability.
Growth possible in the organic/bio/exotic sector.	Increasing importance of mushrooms grown locally.
Post-pandemic awareness of health consequences of dietary habits, puts fruit and vegetables, including mushrooms, at the top of the recommended food list.	
Spain	**Spain**
Mushrooms are part of the Mediterranean diet. Healthy product, compatible with any diet.	Younger consumers eat less mushrooms than older age groups. We need to promote it, informing about its properties.
More people demand healthy food and mushrooms are the perfect product.	Sales prices have not increased in line with the increase in production costs.
Meat substitution is increasingly popular.	Rising costs for Spanish producers.
There are more vegan/vegetarian people and mushrooms can play a role in their diets.	Entry of product from third countries with lower production and labour costs.
The mushrooms consumption in Spain is low, compared to other European countries. There is a growth opportunity.	
Exciting potential for developing new presentations that are more convenient for consumption.	

Overall combined SWOT

Strengths	**Weaknesses**
The European mushroom sector provides enough mushrooms to meet the demand.	Small product group which is not recognized enough for its benefits.
Extremely low imports into the EU-27 from third countries.	Rising (energy) costs for the production.
Mushroom production is present in every Member States.	Elevated level of capital invested to grow mushroom which cannot be switch to another crop
Year round high mushroom productivity for a stable price.	High power of retail on the level of mushroom prices.
The production of mushrooms in the EU is highly sustainable (use agricultural waste to grow, little land use, hardly any pesticides, water and CO2)	Stable year round production (for same price) is necessary because of the high investment & regular costs.
Natural source Vitamin D (Good substitution for meat), especially where enough sunlight is lacking.	(Younger) people not/hardly aware of the positive aspects of mushrooms (low awareness)
Mushroom is one of the best agricultural products to meet rising needs in terms of sustainability and healthy diet. The golden standard for circularity.	Lack of knowledge how to prepare mushrooms.
Opportunities	**Threats**
High potential of growth of consumption among	Rising costs to grow mushrooms in the EU,

consumers.	especially in energy.
Consumer demand (especially the younger generation) for more vegan & healthy diets.	Younger generations of consumers tend to eat less mushrooms.
Meat substitution is increasingly popular (vegan), especially with younger people.	The normal mushroom market has been stable (slightly decreasing) for the past 3-5 years.
Interest and demand for sustainable vegetables.	The growth in 2020-2021 was an temporarily exception.
Informing/educating especially younger people about mushrooms.	Problem to access enough labour force could negatively impact the level of the EU-27 production.

Sources market analysis

See the separate ANNEX 5.

Objectives

The overall objectives of the actions are:

- **Strengthen Awareness of the targeted consumers about the positive aspects of European mushrooms.**
- **Improve positive Attitudes towards European grown European mushrooms.**
- **Increase Buying Intention of European mushrooms for the use at home or as gift.**
- **Resulting in growth of production & sales (ROI) of European grown European mushrooms.**

The current Awareness, Attitude & Buying Attention for European mushrooms has not been measured in all 9 target countries. In the 4 main target markets France, Germany, Italy & Spain an advertising campaign will be implemented to realise extra sales.
A Zero measurement will be necessary beginning of 2023 and will be part of the EU promotion campaign.
At start of the Promotional campaign research will be down to get the actual figures as 0-measurement (baseline) for the campaign.
The objectives will be achieved by:

- Spreading knowledge about the specific (positive) characteristics of European mushrooms in terms of the contribution to a Healthy balanced Diet, sustainability as well as quality, looks, diversity, authenticity & traditions. Make European mushrooms more special.

The focus will be on the direct Promotion of European mushrooms towards consumers by education and creative inspiration, to stimulate them to buy and use more European mushrooms. Supported by stimulating the whole Mushroom chain, including wholesalers & retailers.

Objectives European mushrooms	**2022** (0-measure-ment)	**2022** (1st measurement)	**2023 (1st half year)** (2nd -measurement)	**2024 (1st half year)** (Result after 3 years)
In all 9 target countries (only awareness campaign)				
Awareness	M1-M3	+5% +10% (4 main markets)	+5% +10% (4 main markets)	5% +10% (4 main markets)
Positive attitude	M1-M3	+3% +5% (4 main markets)	+3% +5% (4 main markets)	+3% +5% (4 main markets)
Buying Intention	M1-M3	+2% +3% (4 main markets)	+2% +3% (4 main markets)	+2% +3% (4 main markets)
In the 4 main target markets FR, GE, IT & SP / Millennials				
Wholesale sales	-	+7.7%	+7.7%	+7.7%

Table: Objectives Mushroom Promotion 2023-2025

SMART Objectives

Specific
The objectives are clear and specific growth figures of **Awareness** and to raise the **Attitude** towards European mushrooms and an increasing effect on sales & **consumption**.
Measurable
To measure the effects of the campaign, **Awareness**, **Attitude**, **Buying Intention and sales** of the designated target group will be measured each year.
Achievable
The Promotional campaign of 3 years will be conducted with a clear and realistic focus on **strengthen awareness, growth positive attitude** and **growth of the buying intention** with **positive effect on sales** of European mushrooms among the targeted consumers in 3 EU target countries.
Result-focused
The aim of the campaign is to change the target audiences' awareness, attitude & buying intention will lead to