



ITALIAN AGRICULTURE IN FIGURES 2021



CREA - Research Centre for Agricultural Policies and Bioeconomy



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Now at its 34th edition, "L'agricoltura italiana conta" (Italian agriculture in figures), edited by the CREA Research Centre for Agricultural Policies and Bioeconomy, provides a snapshot of trends in the agricultural sector and a picture of the relationships woven by the primary sector with the rest of the economy, society and the environment. The publication presented here is the result of complex work to collect and collate data on the agri-food sector, thanks to the efforts of CREA researchers, most of whom work at the Research Centre for Agricultural Policies and Bioeconomics.

2020 was the year of the pandemic that also affected the primary sector and the agri-food system as a whole, albeit to a lesser extent than other production sectors, with repercussions for production, employment, distribution and consumption patterns.

Production value in agriculture, forestry and fishing stood at just over €59.6 billion in current values, a contraction of 2.5% compared to the previous year, reflecting a reduction

in the volumes produced (-3.2%), only partially offset by a slight increase in the prices of the products sold (+0.8%). Overall, the added value of the sector fell by 3.8%. The most negative trend can be attributed to the fishing sector, which recorded a real setback (-11.4%), due to the sharp drop in business volumes and the closure of important sales channels for fresh products (Ho.RE.CA). Secondary activities were also severely affected by mobility restrictions and social distancing measures, dropping by more than 20%, with the worst trends being recorded for agritourism and its educational and social recreational services (-60.8% in volume and -60.5% in value), and the horticultural sector (-8.4%). Despite the poor performance, and due in part to the effects of the pandemic on other branches of the system as a whole, the importance of the primary sector for the national economy was consolidated, standing at 2.2% of GDP. The food industry also retained its importance (2.1% of GDP), confirming the strategic position occupied overall by the

agri-food industry within the national economy. If we look at the value of the extended agri-food system, from Farm to Fork, thereby including the components of commercial intermediation, retail distribution and catering, we can see how its role becomes much more significant, rising to 17% of the entire economy, with a turnover of approx. €512.3 billion. The fundamental importance of the agri-food sector is also confirmed within the results achieved by the bioeconomy, in which Italy, together with Germany and France, holds a leading position at European level in terms of number of plants and turnover.

The agri-food sector also proved more resilient than other sectors in international trade. The superiority of agri-food exports over imports – €45 billion compared to €42.3 billion – generated a positive balance for agri-food (+ €2.6 billion). The performance of the "Made in Italy" component contributed most to this result, with exports growing in value by 2.1% compared to 1.3% for the agri-food sector as a whole.

With regard to work, the strictly essential nature of agricultural activity meant that employment in the sector remained substantially stable in terms of the number of people employed (940,000) and, in terms of hours worked (-2.6%) and labour units (-2.3%), fell much less than the economy overall (-11% and -10.3% respectively).

Critical issues unrelated to the pandemic include the lack of care for the land, the ongoing erosion of agricultural land, and the abandonment of inland agricultural areas. All this, together with climate change and the virulence of pathogens affecting crops, makes the sector particularly exposed and vulnerable. Forestry data indicate a steady and continuous growth in forest area, but

at the expense of cultivated land, mostly resulting in the formation of poor forests and scrubland, and large tracts of neglected land with the potential to fall victim to summer fires. Land consumption data confirm an expansion of artificial areas, to the detriment of cultivated and natural areas, with a significant impact on arable land, fodder crops, tree crops, olive groves and orchards.

On the other hand, it is worth highlighting the leading role played by the agroforestry sector in the absorption of greenhouse gases, which is growing strongly and amounts to 41.5 Mt CO₂e per year, thanks mainly to the contribution of forests, grasslands and long-lived wood products, which act as net absorbers (carbon sinks). Another figure of interest as regards

environmental issues is the increase in the area farmed organically, which exceeded 2 million hectares, bringing the proportion of organic UAA to 16.6% of total UAA. Four Italian regions have exceeded the 25% target and three others are close to reaching this threshold, set by the 2030 Farm to Fork strategy. The hope is that policy at all levels, at this particular time of the launch of the new CAP and the National Recovery and Resilience Plan, will address the development of the agricultural sector in a systemic fashion, listening to the demands of civil society and not neglecting land management and care, thus enhancing the contribution of agricultural activity to balanced and sustainable development.

Director of the CREA Research Centre
for Agricultural Policies and Bioeconomy

Roberto Henke



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BACKGROUND DATA

AREA AND POPULATION

The total area of Italy is 302,073 km², with a maximum width of 1,180 km and a maximum length of 530 km. Its considerable length makes the soil and climate characteristics of the Italian territory very varied, favouring the development of very diversified cultivation systems that generate highly specialised agri-food products.

The Corine Land Cover data produced by ISPRA and updated in 2018 highlight the agricultural vocation of the Italian territory (more than 50% of the surface), and the large extension of forest and natural

areas, especially in the Alps and Apennines.

Italy's demographic picture has undergone a profound change due to the impact of Covid-19¹. The negative effects produced by the epidemic have amplified the population decline trend that has been under way since 2015, with a record low number of births (404,000) and a high number of deaths (746,000). As of 31 December 2020, the resident population was almost 384,000 lower than at the beginning of the year, down 0.6%.

Coverage and use of the territory, 2018



Source: ISPRA.

¹ See the ISTAT report, *Population dynamics during the COVID-19 pandemic/year 2020*.

GROSS DOMESTIC PRODUCT

In 2020, Italy's GDP collapsed to an unprecedented extent (-8.9% at constant prices), due to the health crisis. This recession arrived after two years of substantial stagnation, but according to the latest forecasts, the country can expect a recovery as early as 2021 and 2022. According to the International Monetary Fund, Italy's GDP was €1,651,595 million (a variation of more than -7% compared to 2019 at current prices), while GDP per capita was approx. €26,104. The fall in GDP was accompanied

by a decrease in both exports (-13.8%) and imports (-12.6%) of goods and services. As regards employment, ISTAT reported declines of approx. -7.8% for national final consumption and -9.2% for gross fixed capital formation.

The volume of final consumption expenditure by resident households decreased by 10.7%. Within domestic final consumption, both components (services and goods) were down by 16.5% and 6.4% respectively. Household disposable income showed

growth in value of approx. 1%, or just 0.5% in real terms of purchasing power. The propensity to save, on the other hand, remained stable at around 8%. The component linked to the net borrowing of public administrations (9.6% of GDP) also highlights significant deterioration compared to 2019, mainly due to the support measures introduced to counter the effects of the crisis.

2020 was also characterised by negative inflation: -0.2% on an annual basis (+0.3%

GDP performance in Italy

Current prices	2014	2015	2016	2017	2018	2019	2020
GDP (€ mln)	1,621,827	1,652,085	1,689,748	1,724,955	1,770,316	1,789,747	1,651,595
GDP per capita	26,589	27,662	28,394	28,814	29,498	29,710	26,104
% variations compared to the previous year	2014	2015	2016	2017	2018	2019	2020
Growth rate % (constant prices)	0.1	0.9	1.1	1.6	1.1	0.3	-8.9
Harmonised consumer price index	0.2	0.1	-0.1	1.3	1	1.4	0.7
Exports (goods and services)	2.7	4.4	2.1	5.9	1.9	1.9	-13.8
Imports (goods and services)	3.2	6.8	3.6	5.5	2.3	2.2	-12.6
Net exports goods and services (€ mln)	46,275	47,887	54,134	50,304	43,961	40,351	34,799

Source: International Monetary Fund (estimates).

monthly in December). The debt-to-GDP ratio jumped to 155.6% (it was 134.6% in 2019). In absolute terms, debt stood at €2,569.258 billion compared to €2,409.904 billion in 2019. These results combined with the absence of public and private invest-

ment worsened the country's recession, which began in 2018.

According to estimates by the International Monetary Fund (IMF), GDP trends in the main industrialised countries were down by up to 8% compared to 2019, especially

in the case of Spain, the United Kingdom, Italy, France, but also Mexico and India. The world economy as a whole recorded a strong rate of global deceleration due to the pandemic. China continued to account for the largest share of GDP, followed by the US, India and Japan.

GDP performance in some countries (% variation at constant values)

	2016	2017	2018	2019	2020	% world GDP
Brazil	-3.5	1.0	2.3	1.4	-4.1	2.4
Canada	1.4	3.0	2.1	1.9	-5.4	1.4
China	6.7	6.9	6.6	5.8	2.3	18.3
Korea	2.8	3.1	3.0	2.0	-1.0	1.8
France	1.2	1.8	2.1	1.5	-8.2	2.3
Germany	1.9	2.5	2.5	0.6	-4.9	3.4
Japan	0.9	1.7	1.2	0.3	-4.8	4.0
India	7.1	6.7	7.4	4.0	-8.0	6.8
Italy	0.9	1.5	1.5	0.3	-8.9	1.9
Mexico	2.9	2.0	2.3	-0.1	-8.2	1.9
United Kingdom	1.9	1.8	1.6	1.4	-9.9	2.2
Russia	-0.2	1.5	1.7	2.0	-3.1	3.1
Spain	3.3	3.1	2.8	2.0	-11.0	1.4
United States	1.5	2.3	2.9	2.2	-3.5	15.9
Turkey	3.2	7.0	4.4	0.9	1.8	1.9

* Measured on the basis of purchasing power parities, as a percentage.

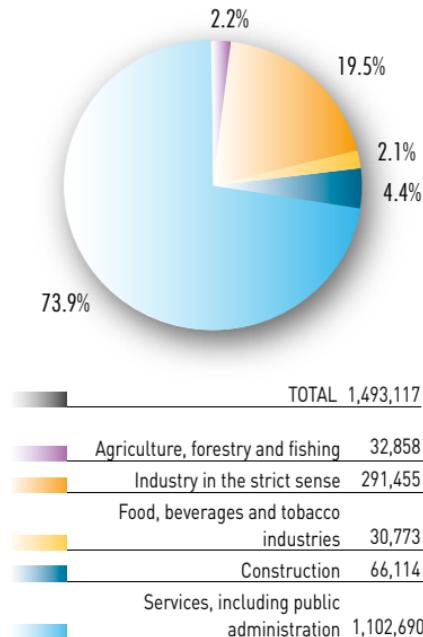
Source: International Monetary Fund.

ADDED VALUE

In 2020, the added value volume with regard to the economy as a whole decreased by 8.7%, with the strongest declines in industry in the strict sense (-10.9%), services (-8.3%) and construction (-6.4%). The agriculture, forestry and fishing sector held up better despite the difficult environment (-6.3%). The primary sector and the food industry maintained their significance, overall confirming the strategic position of the agri-food industry within the national economy. At €32,858 million, agriculture accounts for 2.2% of national added value. The food industry is also on the same level, accounting for 2.1% of the total with €30,773 million. In 2020, agricultural production was subject to a reduction that particularly affected the production of olive oil (-14.5%)

and secondary activities (-20.3%), among which the agritourism business with its educational and social recreational services (-60.8% in volume and -60.5% in value), the floriculture sector (-8.4%) and agricultural support services (-4.1%) were especially hard hit by the pandemic. In the EU, the value added by agriculture accounted for 1.8% of the total, with Greece, Latvia, Romania and Hungary contributing the most with shares of around 4%. The largest decreases were recorded in Romania (-9.4%), the Netherlands (-3.1%), Germany (-2.9%), Italy (-2.6%) and France (-2.1%), while increases in value were recorded in Poland (+6.6%), Hungary (+4.8%), Ireland (+2.8%) and Spain (+2.4%).

Breakdown of added value (Values at current prices) € mln, 2020



Source: ISTAT, National Accounts.

% share of agricultural added value* out of total AV of individual EU countries, 2020

Countries	%	Countries	%
Austria	1.2	Luxembourg	0.2
Belgium	0.8	Malta	0.5
Bulgaria	3.9	Netherlands	1.8
Cyprus	2.1	Poland	2.7
Croatia	3.9	Portugal	2.4
Denmark	1.5	United Kingdom	4.8
Estonia	2.5	Czech Republic	2.1
Finland	2.8	Romania	4.2
France	1.8	Slovakia	2.4
Germany	0.8	Slovenia	2.3
Greece	4.7	Spain	3.4
Ireland	1.0	Sweden	1.6
Italy	2.2	Hungary	4.1
Latvia	4.3		
Lithuania	3.7	EU 28	1.8

*Calculated on the basis of Added value at current prices - € mln.

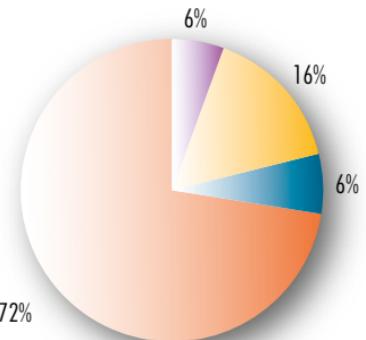
Source: Eurostat.

EMPLOYMENT

In 2020 in Italy, according to ISTAT national accounts data, the overall number of people in employment (24,978,000) fell by 2%; the pandemic triggered a sudden interruption to a positive trend that had lasted five years. The categories characterised by structural disadvantages were the most penalised: the gap between the employment rate of women (48.9%) and that of men (67.2%) increased from 17.8 to 18.3 points, and the generation gap worsened from 19.3 to 21 points with the employment rate of the under-35s at 39.8%. There was also a very significant impact on workers with foreign citizenship, whose employment rate (57.4%) fell by 3.7 points, becoming lower than that of Italian

citizens (58.1%). In addition to this, the pandemic had a major influence on the way work is carried out, with greater use of working from home, which rose from less than 5% in 2019 to 19.4% in the second quarter of 2020, creating a discontinuity in organisational forms that seems likely to persist beyond the emergency situation. The strictly essential nature of agricultural activity meant that employment in the sector showed very specific trends, with a substantial stability in terms of people (940,000) and a decrease in terms of hours worked (-2.6%) and work units (-2.3%) that was less than for the economy as a whole (-11% and -10.3% respectively).

Total work units (000), 2020



	TOTAL	21,666
Agriculture, forestry and fishing	1,239	
Industry in the strict sense	3,370	
Construction	1,357	
Services	15,701	

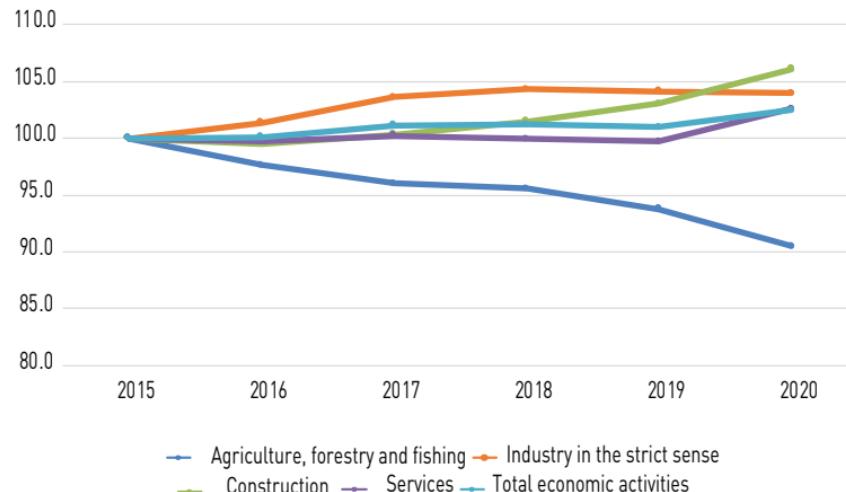
Source: ISTAT, National Accounts.

PRODUCTIVITY

According to ISTAT, in 2020 labour productivity, understood as value added at basic prices per hour worked, increased in the economy as a whole by +1.5% compared to the previous year (base year 2015=100). The indices for the sectors show different trends: the most evident decrease was in agriculture, forestry and fishing, at -3.5% (down by more than one and a half percentage points compared to the previous year's variation). Labour productivity in industry in the strict sense of the word recorded a smaller decline (-0.2%), while construction and services were the sectors with a positive result (+2.9%).

According to Eurostat, the index of labour productivity in agriculture in the EU27 fell sharply in 2020, -4%, following the increase recorded in 2019. In addition to the climatic conditions affecting this sector, the pandemic has also had its effects. In addition to Italy, there were four other countries where the index dropped even more significantly: Romania (-47.2%), Ger-

Labour productivity - value added at chain-linked basic prices per hour worked - indices 2015=100



Source: ISTAT.

many (-15.5%), Poland (-9.6%), France (-7.6%). Meanwhile, an increase was recorded in Lithuania (+18.1%), Spain (+12.5%), Ireland (+11.8%) and Hungary (+10.3%).

BIOECONOMY

The bioeconomy comprises economic activities that use renewable biological resources from the land and sea – such as agricultural crops, forests, land and marine animals and microorganisms, and organic residues – to produce food and feed, materials, energy and services.

In Italy, the bioeconomy's estimated turnover in 2020 amounted to €316 billion, showing resilience compared to other sectors of the economy that were more affected by the crisis caused by the pandemic. The agri-food industry plays a key role in the Italian bioeconomy, while the other most important industrial sectors include the textile, fashion, tanning and pharmaceutical industries, for which around 50% of the turnover comes from bio-based products. Italy, together with Germany and France, has a leading position in all sectors of the bioeconomy and is the top European country in terms of the number of facilities for the production of biomaterials and chemical and pharmaceutical products of biological origin.

Turnover of the bioeconomy in Italy (millions of euros)

	2018	2019	2020
Agriculture, forestry and fishing	61,089	61,189	59,684
Food, drink and tobacco industry	139,015	143,546	141,212
Bio-based textiles	43,227	42,775	32,487
Wood and wooden products	13,690	13,568	12,272
Paper and paper products	24,116	23,619	22,036
Bio-based chemistry	5,432	5,485	5,040
Bio-based pharmaceuticals	13,889	14,047	13,677
Bio-based plastic and rubber	3,854	3,849	3,514
Bio-based furniture	13,972	14,144	13,075
Electricity	3,278	3,521	3,528
Biofuels	139	316	N/A
Management and recovery of biodegradable waste	8,215	8,074	7,430
Bioeconomy	334,553	339,093	316,974
Total economy	3,365,883	3,401,890	3,103,261
Bioeconomy % share of the total economy	9.9	10.0	10.2

Source: based on ISTAT and Eurostat data, Banca Intesa.

Significant interventions in the area of the circular bioeconomy are foreseen by the National Recovery and Resilience Plan as part of its mission, which focuses on the green revolution and on ecological transition, with interventions to increase the use of renewable energies, to construct

plants for sorted waste collection, waste processing and recycling, to establish green supply chains and to strengthen strategic production chains for the transition process (agri-food, textiles, electronics, paper, cardboard and plastics).



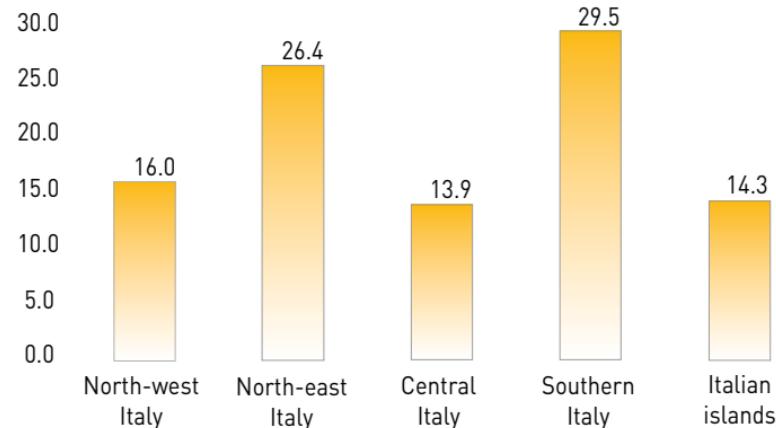
AGRICULTURAL BUSINESSES

AGRICULTURAL BUSINESSES

Pending the results of the 2020 Agriculture Census, due in spring 2022, and the update of the Farm Register¹, data from the Asia Agricoltura register are presented for an overview of the situation of a large proportion of farms.

The Asia Agricoltura data for 2018 refer to 415,745 businesses, with a total UAA of 8,265,094 ha. Of these, 94.6% are agricultural businesses with a farm, and the remainder are businesses engaged in agricultural support activities, forestry and fishing and aquaculture. From the point of view of territorial location, these businesses are polarised between northern and southern Italy, while a smaller proportion is located in the centre of the country. The prevailing legal form is the sole proprietorship, which alone accounts for more than 80% of the total, while about 12% is represented by partnerships and the remaining 4% by corporations, cooperatives and other forms.

Agricultural enterprises by geographical breakdown - percentage share, 2018



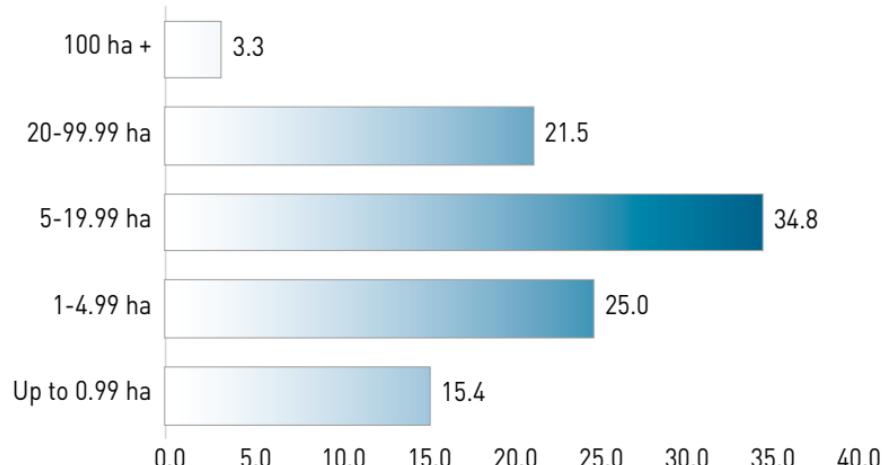
Source: Asia Agricoltura register, ISTAT.

¹ The Asia Agricoltura register includes companies belonging to the economic activity sector of Agriculture, Forestry and Fishing. The survey units are the businesses active during the year, classified in the agricultural sector according to the criterion of the main economic activity carried out. The annual updating of the register is carried out by integrating information from different administrative sources: the Tax Registry, entities with a VAT number, the Business Register of the Chambers of Commerce and the INPS archives.

BUSINESSES BY UAA CATEGORY

The physical size of the agricultural businesses is mostly small to medium: more than 40% have an area of less than 5 hectares. Approx. 35% are businesses with an area between 5 and 20 hectares. Only a quarter of businesses have over 20 hectares; businesses with areas over 100 hectares represent a very small share, accounting for just over 3%.

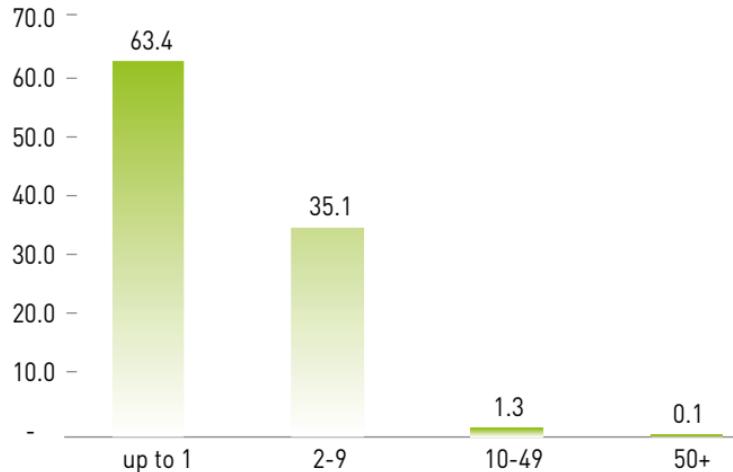
Agricultural businesses by UAA category, percentage share



Source: Asia Agricoltura register, ISTAT.

BUSINESSES BY EMPLOYEE CATEGORY

Percentage distribution of agricultural businesses by employee category, 2018



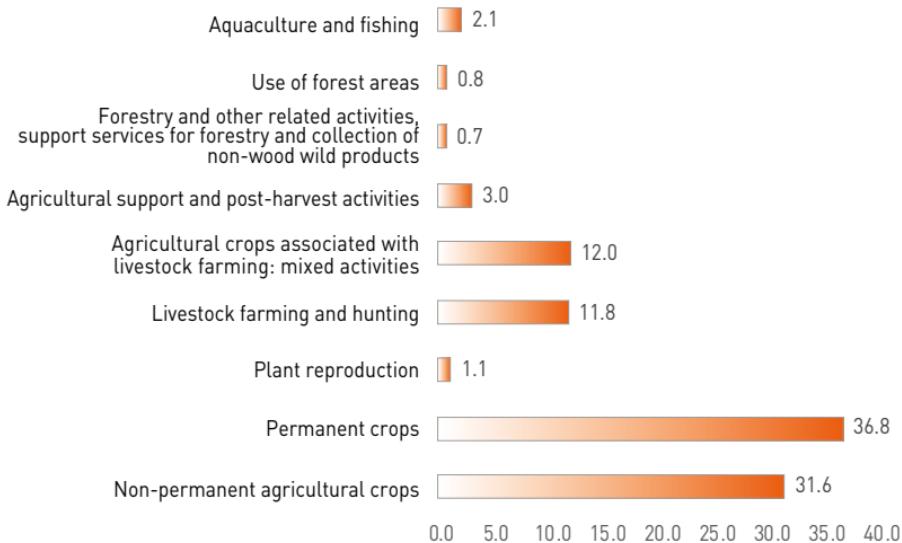
The businesses are also micro-organisations in terms of the number of employees; in fact, in most cases (over 60%), they are businesses with just one employee. Approximately one third are businesses with up to 10 employees and only a very marginal proportion have more than 10.

Source: Asia Agricoltura register, ISTAT.

BUSINESSES BY MAIN AGRICULTURAL ACTIVITY

The main economic activities carried out by businesses belonging to the agriculture, forestry and fishing macro-sector are mainly related to crops, both permanent (more than 36%) and non-permanent (just under 32%). There is also a significant number of farms that combine cultivation with livestock breeding, as well as those that specialise in livestock breeding only, with other activities playing a more secondary role.

Percentage distribution of agricultural businesses by main economic activity, 2018

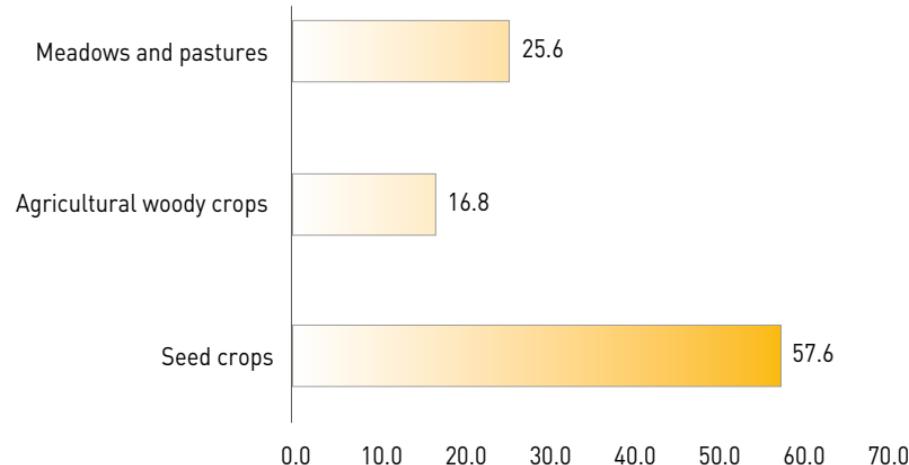


Source: ISTAT.

UAA BY MAIN CROPS

The distribution of UAA by main crops shows a clear prevalence of arable crops, which alone occupy more than half of the utilised area, followed by meadows and pastures (25.6%) and wood crops.

Percentage distribution of UAA by main crops

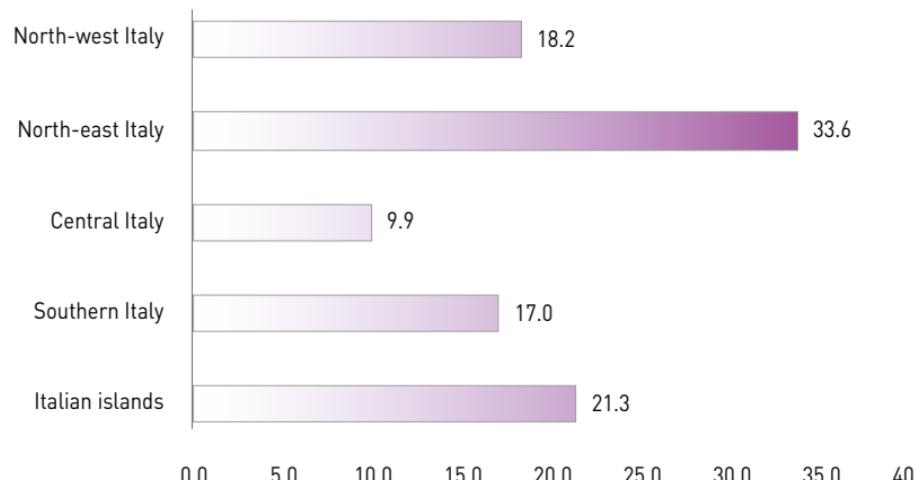


Source: Asia Agricultura register, ISTAT.

BUSINESSES BY LIVESTOCK FARMING ACTIVITY

With regard to the livestock farming activity carried out by businesses in the Asia Agricoltura register, the main economic activity is taken into consideration and, in particular, the ATECO codes relating to "animal farming and hunting" and "aquaculture and fishing". The analysis on a territorial level shows a strong concentration of these activities in the north, where more than half of the businesses are located, with a prevalence in the north-east. There are also a significant number of businesses on Italy's islands, where more than 20% of them are based.

Percentage distribution of agricultural businesses with livestock farms by geographical breakdown, 2018



Source: Asia Agricoltura register, ISTAT.



AGRICULTURE, FORESTRY AND FISHING

PRODUCTION OF THE AGRICULTURE, FORESTY AND FISHING SECTOR

The COVID-19 pandemic also profoundly affected the economy of the national primary sector, albeit to a lesser extent than other sectors, mainly as a result of the immediate decision to include a large proportion of the agri-food system among the “essential” production categories, which suffered fewer restrictions than other sectors. During the year, the value of production of the agriculture, forestry and fishing branch reached in excess of €59.6 billion in current values, a reduction of 2.5%, reflecting a clear fall in the volumes produced (-3.2%), only partially offset by a slight increase in the prices of products sold (+0.8%). Overall, the added value of the branch fell by 3.8%, despite the slight decrease in intermediate consumption expenditure (-0.7%), which was

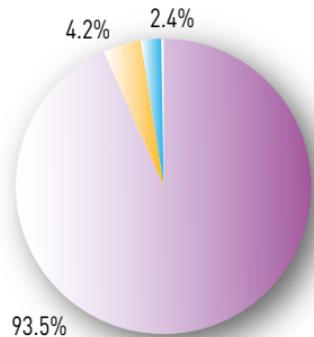
exclusively due to a fall in prices.

Despite the poor performance, which is aligned with a macroeconomic framework that is under stress, the percentage share of the agriculture, forestry and fishing branch within the national economic system was consolidated, remaining at 2.2% of GDP.

The overall result achieved by the branch was the result of somewhat differentiated behaviour among its three components. While agricultural activity and, above all, fishing showed a declining trend, the forestry sector showed a slight increase in productive activity, which, however, did not significantly affect the overall result, due to its modest share of the total (4.2%). The most significant change can be attributed to fishing, which recorded a

real setback (-11.4%), driven downwards by a sharp contraction in business volumes, heavily influenced by the difficulties associated with the pandemic and the closure of important outlet channels for fresh products (Ho.Re.Ca.). However, both of these two components remain marginal compared to agriculture, which alone accounts for 93.5% of the branch total. The reduction in added value affected all areas of the country, albeit with significant differences in terms of intensity. The biggest drop was recorded in the central and southern areas and the islands. There were less significant in the two northern areas, especially in the north-west. The only region in Italy that recorded a modest positive change (+1.5%) was Veneto.

% composition of the production value of the Agriculture, Forestry and Fishing branch, 2020



	€ mln	% var. 2020/19
Agriculture	55,740	-2.4
Forestry	2,476	0.8
Fishing	1,421	-11.4

Source: ISTAT.

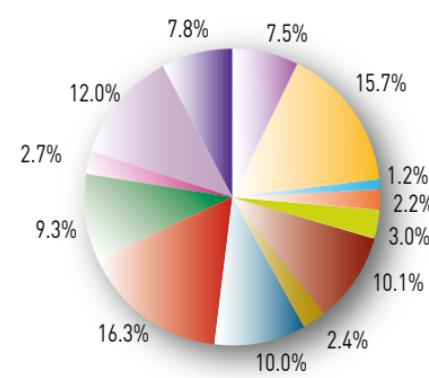
AGRICULTURAL PRODUCTION

In 2020, the value of national agricultural production stood at €55.7 billion. Of this, 29.5 billion was accounted for by plant crops, 16 billion by livestock products and the remainder by diversification activities (supporting and secondary).

The difficulties linked to the spread of the pandemic were felt in very different ways by the various segments that make up the agricultural sector, which as a whole showed a drop in production value of 2.4%, which was even more marked in terms of volumes produced (-3.2%). Secondary activities suffered the most from mobility restrictions, as well as from social distancing rules, falling by more than 20%. Among crops, on the other hand, the negative trend was generalised for fodder crops and woody crops, while herbaceous crops showed more differentiated behaviour. The livestock sector, also down, was mainly affected by the results of the meat sector.

With regard to added value, the decline recorded by the agricultural sector was

Production of goods and services at basic prices of agriculture - Current prices (€ mln), 2020



Cereals and dried pulses ¹	4,232
Vegetables ²	8,908
Industrial crops ³	666
Floriculture	1,231
Fodder crops	1,700
Wine products	5,728
Olive products	1,340
Fruit and citrus	5,658
Meats	9,223
Milk	5,249
Eggs and other ⁴	1,544
Agricultural supporting activities	6,796
Secondary activities (+) ⁵	4,399

¹ Dried pulses (€174 mln).

² Of which potatoes (€740 mln) and fresh beans (€291 mln).

³ Sugar beet (€71 mln), tobacco (€201 mln), sunflowers (€68 mln), soy (€290 mln).

⁴ Of which honey (€70 mln).

⁵ Secondary activity (+) is understood to be that carried out within the agricultural sector relating to agritourism, fruit, milk and meat processing, renewable energy production, etc.

Source: ISTAT.

Value of production and services at basic prices by main sectors, 2020

	Current values		Variations % 2020/19		
	€ mln	%	on current values	on chain-linked values	implicit prices
Production of agricultural goods and services	52,275	93.8	-0.5	-1.4	0.8
- Herbaceous crops	15,037	27.0	3.8	-0.1	3.9
- Woody crops	12,726	22.8	-1.6	-3.2	1.7
- Fodder crops	1,700	3.0	-4.8	-0.7	-4.2
- Livestock farms	16,016	28.7	-2.0	0.0	-2.1
- Agricultural supporting activities	6,796	12.2	-3.0	-4.1	1.1
Secondary activities (+) ¹	4,399	7.9	-20.6	-20.3	-0.4
Secondary activities (-) ²	933	1.7	-6.9	0.4	-7.3
Agricultural production	55,740	100.0	-2.4	-3.2	0.9
Intermediate consumption (including FISIM)	25,727	-	0.0	0.7	-0.6
Added value of agriculture	30,013	-	-4.3	-6.4	2.3

¹Activities carried out in the agricultural sector, such as agritourism, processing of milk, fruit, meat, etc.

²Activities carried out in agriculture by other economic branches.

Source: ISTAT.

even more pronounced (-4.3%), and was not even mitigated by the trend in intermediate consumption, which remained stationary.

In the EU 27, 2020 was also characterised by a fall in the value of agricultural production (-1.4%), which was the result of strongly contrasting trends between

countries. Among the most important agricultural partners, reductions were recorded in Romania, the Netherlands, Germany, Italy and France, while Poland,

Agricultural production value at basic prices, Value added and Indicator A for the main EU countries, current values in € mln (2020)*

	EU 27	France	Germany	Italy	Spain	Nether- lands	Poland	Romania
Agricultural production of goods	376,362	68,121	53,404	46,810	51,154	24,635	26,503	14,973
Agricultural production of services	20,155	4,809	2,433	4,992	554	2,798	604	306
Secondary (non-separable) activities	15,255	2,498	967	4,518	1,212	803	70	1,568
Production of the agricultural activity branch	411,772	75,428	56,804	56,320	52,919	28,236	27,178	16,847
Intermediate consumption	234,805	45,246	36,547	24,872	23,631	17,661	16,132	8,925
Gross added value at basic prices	176,967	30,182	20,257	31,449	29,288	10,574	11,045	7,922
Agricultural income indicator A (variation %)	-1.5	-7.6	-14.6	-4.9	+13.0	-5.1	+1.1	-13.8

* The data for Italy differ from those reported in other figures and tables due to some methodological differences in the determination of values between ISTAT and Eurostat.
Source: Eurostat.

Hungary, Ireland and Spain recorded growth. France remained Europe's largest agricultural producer, followed at a distance by Germany and Italy, which are very close in absolute terms. In terms of

added value, Italy is firmly in first place, contributing 17.8% of the total, followed closely by France, Spain and, at a greater distance, Germany. Despite the difficulties posed by this particular year, Italy

once again confirmed its leadership as the biggest contributor to agricultural production of services and secondary activities, accounting for around 27% of the EU total.

PLANT PRODUCTION

Plant, herbaceous, woody and fodder crop productions were strengthened in 2020 as the main component of national agricultural production, reaching a share of 53% of the total. The moderately positive result (+0.9%) can primarily be attributed to an increase in prices (+2.4%), as opposed to a slight contraction in quantities (-1.5%). Within these, herbaceous crops showed growth as an aggregate (+3.8%), although a number of products recorded greater or lesser reductions, including potatoes (-1.2%) and especially flowers (-3%), whose performance was heavily influenced

by the market slowdown caused by closures to contain the spread of COVID-19. Cereal production was good, although its increase in volume failed to mitigate the wide variation in prices, supported by growing demand for certain products, including durum wheat from the processing industry and maize for animal feed. Fodder crops (-4.8%) and woody crops (-1.6%) were also down. This was a result of generalised reductions, peaking in the case of olive oil (-22.4%), which recorded a year of marked decline after the good performance of the previous year, confirming

the strong dependence on cyclical phenomena. Only fruit crops were up (+13.4%). Their positive production results were favoured, with the exception of some alternating production phenomena, by good weather conditions and the attenuation of certain parasites, as well as being driven by an increase in prices. Wine production underwent a contraction of more than 3% in terms of both value and volume, again due to the closure of some important sales channels, which was not fully compensated for by the increase in domestic consumption.

Main crops, 2020

	Quantity		Value ¹	
	000 t	var. % 2020/19	000 euro	var. % 2020/19
Wine (000 hl)	21,665	-3.1	3,890,757	-3.4
Oil	250	-17.5	1,112,335	-22.4
Grapes delivered and sold	3,614	-2.0	1,197,159	-3.5
Fodder (hay)	149,958	-0.7	1,700,290	-4.8
Nurseries	94,814	-7.9	1,417,650	-1.9
Durum wheat	3,886	1.0	1,423,453	16.9
Ornamental flowers and plants	109,549	-9.0	1,230,714	-3.0
Hybrid maize	6,771	8.2	1,285,209	10.4
Tomatoes	6,248	8.1	1,271,687	11.1
Fennel	508	-3.0	937,629	-12.7
Potatoes	1,435	7.2	739,973	-1.2
Apples	2,339	1.5	878,430	5.2
Kitchen gardens*	-	-	-	-
Lettuce	478	-1.9	647,154	0.7
Table grapes	1,012	1.5	624,601	-1.3
Oranges	1,629	-1.3	569,396	-4.0
Courgettes	601	5.5	513,475	6.2
Common wheat	2,669	-2.2	504,411	-3.6
Artichokes	367	-3.1	571,726	19.4
Pears	584	36.1	508,027	11.1

¹ Production at basic prices expressed in current values.

* Data no longer available.

Source: ISTAT.

LIVESTOCK PRODUCTION

In 2020, the overall share of the livestock sector in terms of total national agricultural production remained more or less stable, at 28.7% of the total, despite the declining trend in the value of production (-2%), as a result of a reduction in prices while the volumes produced remained stable.

Among livestock food products, meat in particular seems to have been affected by the difficulties associated with the pandemic. The slowdown in consumption led to a reduction in slaughtering and a consequent decline in the volume produced,

which was not offset by a positive variation in prices. Indeed, the latter showed broad, large and generalised negative trends, which contributed to a decrease in value of -3.9% for cattle, -7.7% for pigs and -3.5% for poultry. The latter is the only one to show a slight increase in slaughtered volumes. Sheep and goatmeat, rabbit, game and poultry also declined in volume and value. The only exception was the horsemeat sector, which recorded moderate growth in quantity and value. Milk production, on the other hand, showed a moderate positive trend (+1.1%,

as an aggregate), also driven by a recovery in domestic consumption. In the case of cow and buffalo milk, this was mainly driven by an increase in volumes produced; whereas, in the case of sheep and goat milk, it was driven more by an upward movement in prices.

Both eggs and honey performed well, with a positive change in production value of +5.8% and +11.8% respectively, which in the latter case was also accompanied by a not inconsiderable recovery in volumes (+2.7%).

Main livestock productions, 2020

	Quantity ¹		Value ²	
	000 t	% var. 2020/19	000 euro	% var. 2020/19
Cow and buffalo milk (000 hl)	124,167	2.9	4,737,934	0.3
Pigs	2,053	-3.6	2,775,406	-7.7
Cattle	1,148	-1.3	2,798,370	-3.9
Poultry	1,882	1.3	2,668,253	-3.5
Eggs (mln pcs)	12,540	-1.0	1,462,951	5.8
Rabbits, game and niche meats	255	-0.5	722,224	-4.6
Sheep and goat milk (000 hl)	6,043	0.5	510,908	9.6
Sheep and goats	55	-5.2	157,348	-3.8
Horses	42	0.7	101,804	1.2
Honey	8	2.7	70,237	11.8

¹ Live weight for meat.

² Production at basic prices expressed in current values.

Source: ISTAT.

DIVERSIFICATION

Supporting and secondary activities in agriculture were the most characteristic element of product trends in 2020. Both components declined in terms of value and volume, but this was due to quite different trends in the various items making up the components. Despite the negative dynamics, the combined value of agricultural production linked to diversification activities (supporting and secondary) was still very high, with an overall contribution of around 20% of the total, of which more than 12% came from the former and just under 8% from the latter.

The supporting activities showed a contraction, representing a unique case over the last twenty years, both in current values (-3%) and in linked values (-4.1%). This result, moreover, can be attributed to just two predominant

items, namely the initial processing of agricultural products, which fell significantly (-8.8%), and active subcontracting services, which fell considerably less (-0.5%). In this case too, the slowdowns and restrictions imposed by the spread of the pandemic had a negative effect, since activities carried out on the farm after harvesting (grading, washing, packaging, processing) were affected by the total or partial closure of many facilities. On the other hand, third-party activities, although also slowing down, showed greater resilience, thanks to the conditions under which the services offered were carried out, which were less restricted due to their nature.

As regards secondary activities, 2020 was characterised by at least two noteworthy aspects. The first regards the significant decline in agritourism-related activities,

including recreational and social activities, educational farms and other minor activities, which contracted by more than 60% in volume and value. This large negative variation was also observed in direct sales (-20.6%) and craft activities (-10.5%), which likewise suffered from mobility restrictions. In addition, there was also a sharp decline in the landscaping of parks and gardens (-26%).

However, it is also worth mentioning that activities related to the production of energy from renewable sources held up well, showing a slight strengthening (+0.8%). This item alone accounted for half of the value of secondary activities in Italian agriculture in 2020. Within it, the biggest contribution came from agricultural and forestry biomass (48%), photovoltaics (41%) and biogas produced from animal manure (11%).

Production of supporting and secondary activities in agriculture, 2020

	Current values (€ mln)	% var. current values		% var. linked values (2015)	Percentage %
		2020/19	2020/19		
SUPPORTING ACTIVITIES					
Processing seeds for sowing	243	+0.7	-0.8	-0.8	3.6
New crops and plantations	187	+0.4	-0.5	-0.5	2.8
Agricultural activities on behalf of third parties (subcontracting)	3,194	-0.5	-1.0	-1.0	47.0
Primary processing of agricultural products	2,153	-8.8	-10.8	-10.8	31.7
Land maintenance	608	+0.8	+0.3	+0.3	8.9
Supporting activities for livestock farming	216	+1.6	+0.5	+0.5	3.2
Other supporting activities	195	+2.3	+1.0	+1.0	2.9
TOTAL	6,796	-3.0	-4.1	-4.1	100.0
SECONDARY ACTIVITIES					
Aquaculture	8	+1.8	+0.8	+0.8	0.2
Processing of plant products (fruit)	172	-6.0	-6.0	-6.0	3.9
Milk processing	298	+1.5	+1.5	+1.5	6.8
Agritourism, recreational and social activities, educational farms	617	-60.5	-60.8	-60.8	14.0
Processing of animal products (meat)	312	-6.9	-3.0	-3.0	7.1
Renewable energy (photovoltaic, biogas, biomass)	2,202	+0.8	+0.8	+0.8	50.1
Craft (woodwork)	56	-10.5	-10.0	-10.0	1.3
Animal feed production	181	-2.8	-3.0	-3.0	4.1
Park and garden landscaping	274	-26.1	-25.0	-25.0	6.2
Direct sales/marketing	279	-20.6	-19.8	-19.8	6.3
TOTAL	4,399	-20.6	-20.3	-20.3	100.0

Source: ISTAT, Economic Accounts for Agriculture.

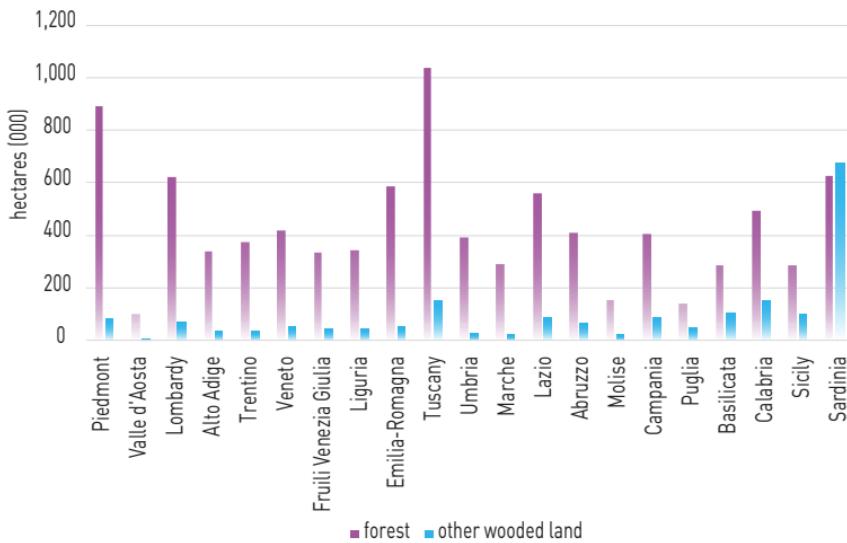
Forest area

The third National Forest Inventory (INFC 2015) confirms the steady growth of the Italian forest area in recent decades, reaching over 11 million hectares (36.7% of the national area). The forest area increased by 586,925 hectares (+5.6%) compared to the previous inventory (INFC 2005). This increase is mainly due to the decrease in agricultural pressure in inland areas, allowing the forest to colonise the previously cultivated area (newly formed forests).

The forest area is spread over a wide distribution of different elevations. The categories of 0-500 m and 500-1,000 m above sea level (asl) host the majority of the forest area, accounting for 37.7% and 35.7% respectively. The other three elevation categories (1,000-1,500, 1,500-2,000 and over 2,000 m asl) comprise 17.7%, 7.6% and 1.4% respectively.

Pure broadleaf formations are the ones that mostly characterise the Italian forest area (approx. 66% of the total area),

Forest area by region



Source: National Forest Inventory.

while pure coniferous and mixed formations individually represent just over 10% of the national total. Pure coniferous formations prevail in predominantly alpine regions.

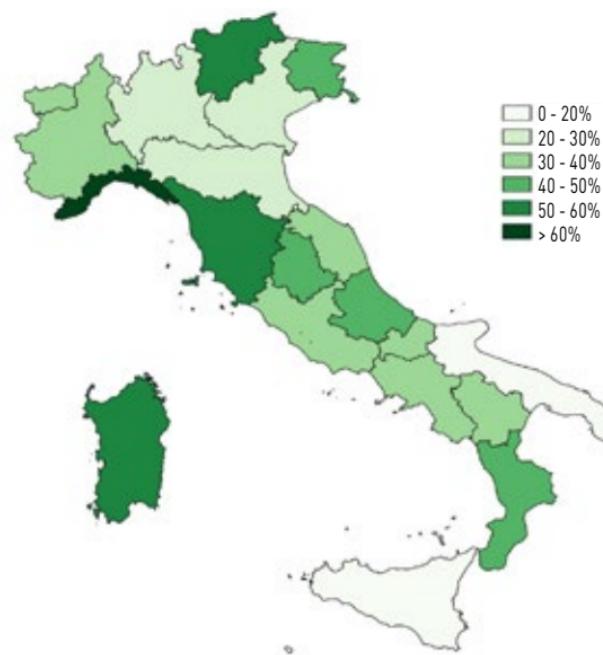
42.3% of the forest area is covered by coppice, while 41.9% is covered by high forest. The remaining area (13.9%) is mainly made up of stands that are not subject to any form of management, at

most affected by sporadic interventions and therefore not ascribable to the canonical forms of reference; it includes areas abandoned by forestry practices due to permanent limits (impervious surfaces, rocky slopes or other limitations imposed by the physical environment) and areas of spontaneous recolonisation of abandoned farmland.

The forest area subject to detailed planning (forest management) is quite limited (15.3%) at national level and varies considerably between the different regions, with a marked difference between those in the north and those in the rest of the country. In contrast, the percentage of land subject to the cutting authorisation system is particularly high, both at national (86.5%) and regional level.

Privately owned woods account for 63.5% of the national total and twice as much forestry work as publicly owned woods. Although more than half of these woods have been abandoned, it is also from these private woods that the majority of

Forestry index by region



Source: National Forest Inventory.

wood is harvested.

The forest area in protected areas is approx. 3.5 million hectares (31.8% of the national forest area), of which 2.8 million are classed as "Forest" and 0.7 million as "Other wooded land". All Italian regions show a considerable share of protected forests within the regional total, which is higher in some central and southern regions (more than 50% in Abruzzo, Campania, Puglia and Sicily), while it tends to be lower in the regions of the Alps, which have a higher forestry index. The only exception is Veneto, where the share is 42.9%.

Production

The upward trend in production volumes in the firewood and industrial wood segments continued in 2019 thanks to the high availability of timber due to Storm Adrian, which hit northern Italy in autumn 2018. The volume of wood felled was estimated at around 12.5 million cubic metres.

In 2020, the pandemic crisis had negative

Wood- and paper- based production trend

	Unit of measurement	2019	2020	Var. %
Pellets and other bonded woods	t	497,000	420,000	-15.5
Wood chips	m ³	5,546,218	3,500,000	-36.9
Wood panels, ply and veneers	m ³	4,387,935	4,263,246	-2.8
Sawn timber	m ³	1,604,641	1,504,200	-6.3
Wood pulp	t	333,776	222,581	-33.3
Paper and cardboard	t	8,908,943	8,513,702	-4.4

Source: FAOSTAT.

effects on all sectors linked to wood production, leading to a sharp drop in production volumes. By analysing the various macro-sectors, we can see that the crisis was strongest for pellets and wood chips, with reductions of -15.5% and -36.9% respectively; it was more contained for sawn timber (-6.3%) and wood panels (-2.8%). The wood pulp sector also recorded a strong variation (-33%), but this is in line with the downward trend highlighted over recent years.

The Italian woodworking sector, particularly as regards high value-added manufactur-

ing such as furniture and construction, is highly dependent on imports and therefore disconnected from the wood production trend in Italy. More than 90% of the wooden raw materials processed in Italy are imported from other countries. In 2019, Italy was the fifth largest EU importer of wood products and the second largest importer of wood pulp.

The fishing fleet

As at 31 December 2020, the number of vessels used by the Italian fishing fleet was 11,939, a slight and consistent decrease on previous years.

The national size of the fleet remained almost unchanged: small-scale fishing accounted for the largest number of vessels, at 8,415, or 70% of the Italian fleet. In second place was bottom trawling, which was far less important, accounting for just 17% of the total. All the other fishing systems occupied a less significant position.

Catches and production value by fishing systems

In terms of economic value and quantity of catches, the superiority of the bottom trawling system is clear to see. With takings of €308 million, it accounted for 48% of the entire value of Italian catches on its own. Small-scale fishing came second, with a share amounting to €166 million

Fleet by fishing system, 2020

Fishing system	No. boats	% of total	Gross tonnage (t)
Hydraulic dredges	709	5.9%	9,328
Bottom trawling	2,053	17.2%	81,914
Trawl lines	251	2.1%	6,416
Small-scale fishing with passive gear	8,415	70.5%	18,981
Purse seines	363	3.0%	11,656
Beam or rapid trawling	58	0.5%	4,566
Pelagic trawling	90	0.8%	6,365
Italy	11,939	100.0%	139,226

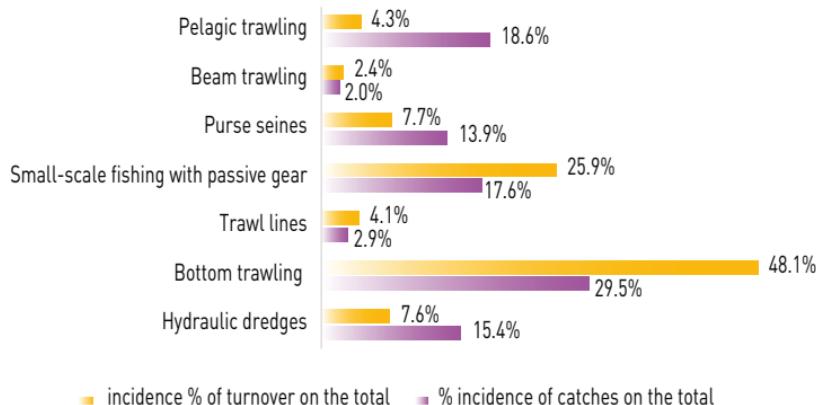
Source: CREA calculations based on fishery data.

Catches and production value by fishing system, 2020

Fishing system	Catches (kg)	Catch value (€)
Hydraulic dredges	20,088,632	48,579,713.71
Bottom trawling	38,387,196	308,710,558.28
Trawl lines	3,814,196	26,369,986.57
Small-scale fishing with passive gear	22,899,401	166,202,709.41
Purse seines	18,115,162	49,585,715.93
Beam trawling	2,556,555	15,389,897.78
Pelagic trawling	24,223,832	27,612,067.03
Overall total	130,084,974	642,450,648.72

Source: CREA calculations based on fishery data.

Percentage of catches and commercial value compared to the Italian total, 2020



Source: CREA calculations based on fishery data.

(just under 26% of the total). In terms of catch quantities, bottom trawling, small-scale fishing and pelagic trawling were almost equal, accounting for 29%, 25% and 18% of the total respectively. Hydraulic dredges also boasted a modest catch (15%), but their economic value,

like pelagic trawling, was far lower.

Geographical distribution of the fleet and catches

An examination of the geographical distribution shows that the highest production values were obtained in Sicily, by

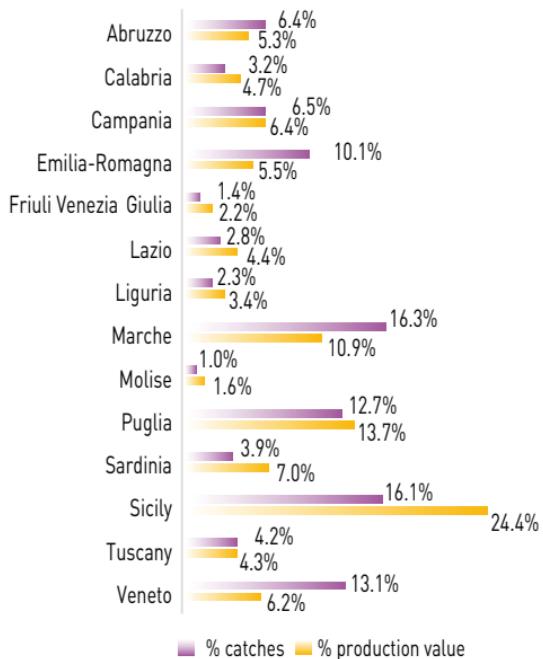
far the region with the highest takings, amounting to €156 million. It was followed by Puglia and Marche, with a percentage of 13.7% and 10.9% respectively. In terms of the quantity of landings, Marche, Sicily and Puglia ranked above the other regions.

Principal species caught and their economic value

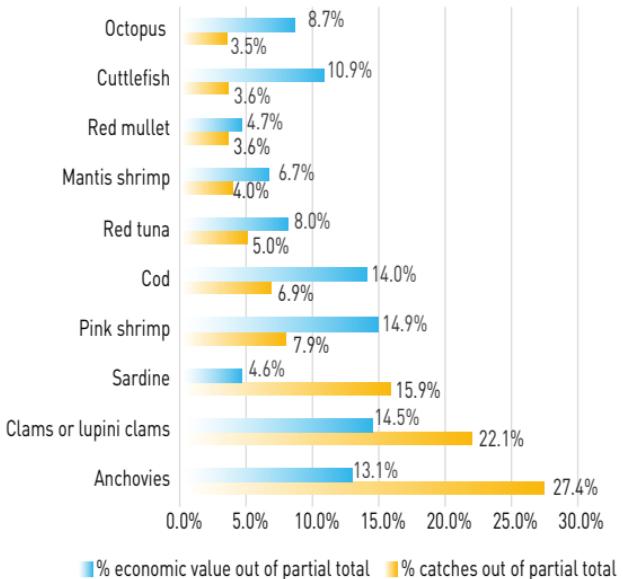
Compared to 2019, the data on the composition of the catch showed an increase in clams, which occupied second place in terms of quantity (22%), pushing sardines into third place.

The undisputed queen of Italy's seas in terms of quantity fished was the anchovy, with 23,000 tonnes caught, although its economic value was only 13%. Prawns, cod, bluefin tuna and cuttlefish brought in the biggest overall takings, despite low catch quotas.

Percentage of catches and commercial value by region, 2020



Top 10 species caught in Italy and their economic value, 2020



Source: CREA calculations based on fishery data.

Source: CREA calculations based on fishery data.

Top 10 species caught in Italy and their economic value, 2020

Species	Catches (kg)	% top 10 total	Production value (€)	% top 10 total
Anchovies	23,735,695	27.4%	39,215,054.94	13.1%
Clams or lupini clams	19,092,102	22.1%	43,573,533.93	14.5%
Sardine	13,784,818	15.9%	13,760,250.33	4.6%
Pink shrimp	6,841,318	7.9%	44,882,682.13	14.9%
Cod	5,929,629	6.9%	42,158,482.86	14.0%
Red tuna	4,349,356	5.0%	24,171,999.47	8.0%
Mantis shrimp	3,437,142	4.0%	20,003,527.94	6.7%
Red mullet	3,142,787	3.6%	14,022,746.77	4.7%
Cuttlefish	3,141,529	3.6%	32,656,743.90	10.9%
Octopus	3,061,990	3.5%	26,034,266.09	8.7%
Partial total (10 species)	86,516,364	66.5%	300,479,288.35	46.8%
OVERALL TOTAL	130,084,974		642,450,648.72	

Source: CREA calculations based on fishery data.

PRICES AND COSTS

In 2020, the agricultural sector's terms of trade, obtained by comparing the producer price index and the intermediate consumption price index, rose again, albeit by less than 1% (+0.7%), due to an increase in the price index of products sold by farmers (+0.8%) mitigated by a slight increase in the intermediate consumption price index (+0.1%).

The medium-term trend (2016–2020) was also favourable. Production prices rose by 11.4%, which is almost twice as much as the increase in prices of current assets (+6.6%), thus having a positive effect on the terms of trade, which rose by 4.6%. If investment, whose prices rose by 6%, is also taken into account as a productive input, the relationship between sale and purchase prices rose at a slightly higher rate (+4.7%).

The increase in the intermediate consumption component was mainly due to increases in seed (+5%), veterinary (+3%) and general expenses (+3%). However, this

Annual variation in price indices and terms of trade



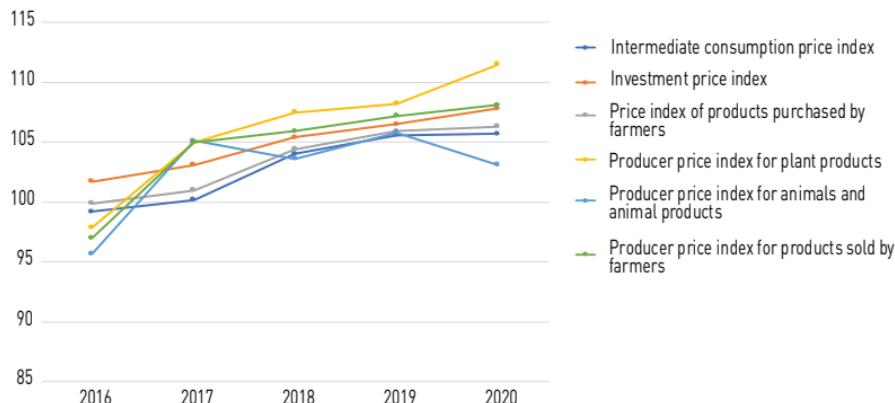
Source: ISTAT.

growth was held back by the significant drop in energy and lubricant costs (-9%) and lower prices for fertilisers and soil improvers (-2%). The value of capital goods also rose, due in particular to intermediate goods, but by a higher percentage than cur-

rent assets (+1%).

In the medium term, there has been an increase in almost all current assets items, in particular overheads (+9%) and seeds (+8%). All capital goods categories recorded increases, reaching 7% in the case of

Price index of products bought and sold by farmers - index numbers



Source: ISTAT.

intermediate goods.

The increase in the price index of products sold by farmers is the result of an increase in prices of plant products (+3%), partly contained by an equal decrease in prices of livestock products. The increase in plant

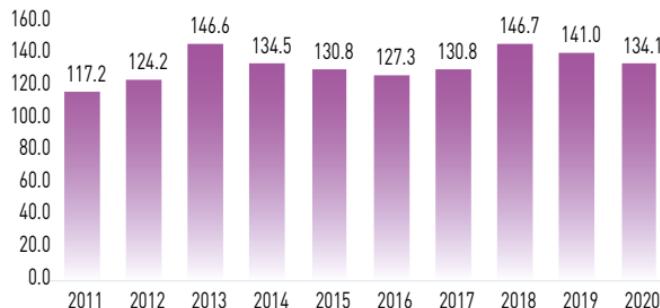
product prices is mainly attributable to the positive trend in wheat (+12%), while the negative change in the livestock sector is the result of declines in almost all sectors, especially pigs (-5%). Meanwhile, the sheep and goat sector held up, with prices

increasing by 1%.

However, this performance does not reflect the medium-term trend, which is characterised by increases in the prices of both plant products (+14%) and animal products and derivatives (+8%). The biggest increases in plant products were in wheat (+23%), horticulture (+20%) and fodder (+20%); in livestock products, the poultry sector (+8%) and animal products (+16%).

INCOME

Index of real factor income in agriculture per annual work unit in Italy



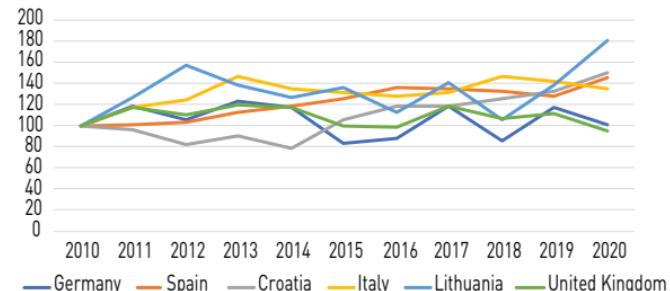
Source: Eurostat.

In 2020, the indicator of real agricultural income per work unit, as estimated by Eurostat, still showed a decrease of approx. -5% for Italy compared to 2019. This trend was more or less in line with the situation in many other EU countries, although the situation in the EU as a whole was fairly stable, with a very slight decrease of just over 1%.

The figure shows that, in Italy, the income

trend over the past ten years has fluctuated to a considerable extent, but has remained constantly above the European average, which currently stands at 127.2. It increased until 2013, when it reached one of its highest values, decreasing in the following years and then rising again in 2017 with the highest value reached in 2018, followed by another decrease over the past two years.

Trend of real agricultural income per work unit in some European countries



Source: Eurostat.

The situation in EU countries is somewhat diverse. The best performers included Lithuania (+23%), Croatia and Spain, both with growth of over 11%. In contrast, the most marked losses were observed in Germany (-17%).



PRODUCTION FACTORS

INTERMEDIATE CONSUMPTION

In 2020, intermediate consumption in current values remained essentially at the same level as in 2019, at around €25.7 billion. The slight contraction in prices (-0.7%) compensated for the corresponding increase in quantities.

An analysis of the individual cost items shows a significant decrease in energy costs (-7.2%) due to the sharp drop in prices (-9.7%). Costs deriving from reuse fell, while those for seeds and seedlings rose (+5%), as did those for other goods and services (+3%).

The progress of the price index for products bought by farmers indicates a recovery in prices in the second half of 2020, particularly for energy, feed and seeds. The intermediate consumption composition shows only one significant change

related to the one percentage point decrease in the share of motive power and the corresponding increase in the level of other goods and services.

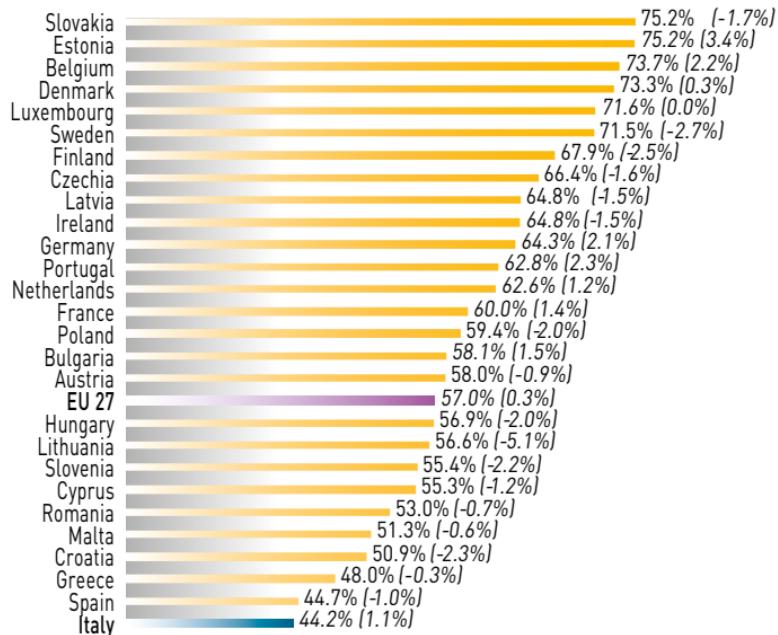
In forestry, the current value of intermediate consumption also remained broadly stable, with a decrease in quantities (-1.1%) and an increase in prices (1.4%). Meanwhile, there was a sharp drop in consumption (-26%) in the fishing and aquaculture sector, with a concomitant drop in prices (-13.7%) and quantities (-12.5%). This is probably due to the negative impact of the period of closure imposed by the pandemic, which significantly reduced the demand for fish products in some commercial channels such as restaurants.

In the European context, Italy recorded

the lowest level of intermediate consumption in relation to agricultural production, which was a consequence of the extensive diversification in Italian agriculture and in Mediterranean agriculture in general, as indicated by the presence of the other countries at the bottom of the table.

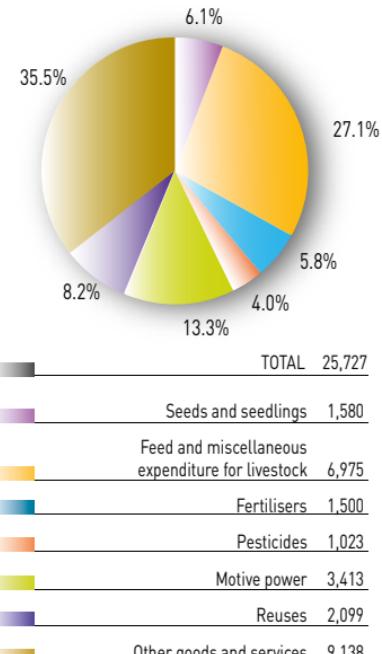
The annual changes in the level of intermediate consumption among the different countries are varied, but generally quite contained and concentrated within the range of a few percentage points. This is a sign of substantial stability in the impact of costs on production, although some cost items have decreased (lubricants -9.7%), while others have increased (animal reuse +4.2%).

Level of intermediate consumption in relation to agricultural consumption in the EU-27 (% in 2020 and variation on 2019)



Source: Eurostat.

Breakdown of intermediate consumption in agriculture (% of total), 2020



Source: ISTAT.

WORK AND EMPLOYMENT

The EU 27 agriculture, forestry and fishing sector employed almost 8.5 million people in 2020, accounting for 4.3% of employment in the economy as a whole. The 2.3% reduction compared to 2019 does not seem to be the effect of the pandemic but rather a tendential phenomenon resulting from a restructuring process that particularly affected the economies of the countries that have most recently joined the Union. In fact, the figure is perfectly in line with the average annual variation in agricultural employment over the last ten years in the EU. Within this process, Italy went against the trend with a positive average annual rate of change, albeit only slightly (+1%). Despite the COVID-19 crisis, Italian agricultural employment held up in 2020, although the number of standard work units fell, particularly those attributable to self-employment, in line with a process of professionalisation that has long seen the impact of the professional agricultural component increase to the detriment of the family component, which is still preva-

Work units in agriculture in the EU (000), 2020

	Total AWU	% non-salaried AWU		Total AWU	% non-salaried AWU
Austria	114	81.9	Luxembourg	3	66.8
Belgium	55	77.5	Malta	5	90.7
Bulgaria	179	63.7	Netherlands	154	52.0
Cyprus	21	69.4	Poland	1,676	89.7
Croatia	176	91.5	Portugal	221	65.5
Denmark	52	42.9	Czech Republic	102	28.9
Estonia	18	29.5	Romania	1,331	88.4
Finland	60	79.1	Slovakia	42	37.0
France	720	61.3	Slovenia	76	91.7
Germany	465	54.0	Spain	785	50.6
Greece	406	83.6	Sweden	54	59.1
Ireland	161	91.8	Hungary	338	65.9
Italy	1,084	67.1			
Latvia	69	75.0			
Lithuania	128	72.9			
			EU 27	8,494	73.4

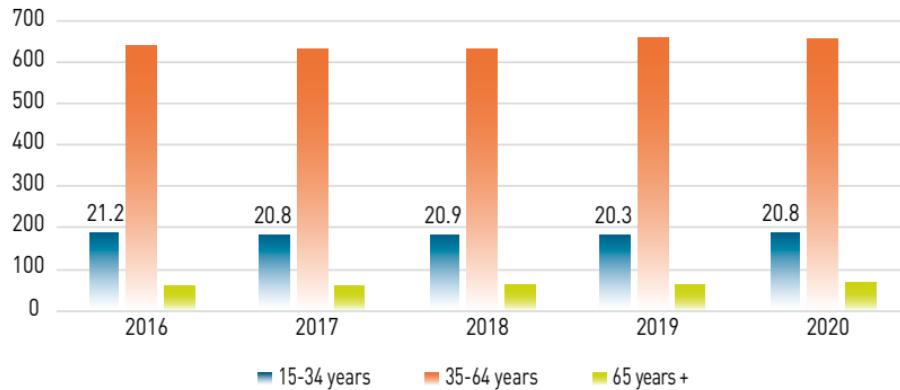
Source: Eurostat.

Employment trend in agriculture, forestry and fisheries, (000)

		2016	2017	2018	2019	2020
Employees	direct employees	463	470	480	482	489
	self-employed	474	452	460	458	452
	total	937	922	939	940	940
Work units	direct employees	429	435	446	447	433
	self-employed	847	816	824	820	806
	total	1,277	1,251	1,270	1,268	1,239

Source: ISTAT, National Accounts.

Employees by age category in agriculture, forestry and fishing (000)



Source: ISTAT, Labour Force Survey.

lent, as in almost all EU countries.

Regarding the effects of the COVID-19 crisis, it is worth pointing out that agriculture has protected youth employment more than the rest of the economy, where the percentage of employment among 15-34 year olds in 2020 fell from 22.1 to 21.4%, while in agriculture it increased slightly.

INVESTMENTS

In 2020, gross fixed capital formation in agriculture, amounting to €9,157 million in current values and €8,691 million in constant values (chained, base year 2015), was significantly lower than in 2019, with variations of -12.2% in both current and constant values.

The trend analysis highlights significant increases from 2016 to 2019, testifying to

a growing climate of business confidence, which was evidently halted by the pandemic crisis of 2020.

The sums invested in 2020 were mainly for the purchase of plant and machinery, with expenditure amounting to €5,289 million (57.8% of the total), a significant reduction compared to the previous year (-16.8%). Negative variations, albeit less

evident, were observed during 2020 for all other types of investment.

The ratio between the investment value and the added value, both expressed in constant values, shows a positive dynamic from 2016 to 2019, highlighting how over the years an increasing share of the sector's production is being allocated to capitalisation; it shows a reversal of the

Gross fixed capital formation trend for agriculture, forestry and fishing*

Years	Current values		Var. previous year	Chained values**	% of***	
	€ mln	%			tot. invest.	Value-added agriculture
2015	7,207	-		7,207	2.6	21.1
2016	7,744	7.4		7,737	2.7	22.6
2017	8,979	16.0		8,835	2.9	26.9
2018	10,113	12.6		9,775	3.2	29.2
2019	10,425	3.1		9,901	3.2	29.6
2020	9,157	-12.2		8,691	3.1	27.6

* As of 23 September 2019, the historical series of national accounts have undergone a general revision, so the data reported here may differ from those in previous versions of Itaconta.

** Chained values, base year 2015.

*** Chained value percentage; value-based agriculture at basic prices.

Source: ISTAT.

Types of investment in agriculture, forestry and fishing*

Year	Rural buildings	var. previous year	Plant. machinery and armaments	var. previous year	Cultivated biological resources	var. previous year	Products of intellectual property	var. previous year
	€ mln	(%)	€ mln	(%)	€ mln	(%)	€ mln	(%)
2015	1,951	-	4,563	-	608	-	85	-
2016	2,118	8.5	4,938	8.2	616	1.3	72	- 15.8
2017	2,699	27.4	5,602	13.4	633	2.7	46	- 35.9
2018	3,157	17.0	6,264	11.8	632	- 0.1	60	30.4
2019	3,409	8.0	6,355	1.4	598	- 5.4	63	5.2
2020	3,213	- 5.8	5,289	- 16.8	593	- 0.7	62	- 2.4
% of total investments	35.1	-	57.8	-	6.5	-	0.7	-

* Current values.

Source: based on ISTAT data.

Gross fixed capital formation: characteristic ratios for the main sectors, 2020*

	Agriculture, forestry and fishing	Manufacturing Industry	Building	Services ¹	Total economic activities
Investments per labour unit					
euros	7,510	19,298	4,407	12,808	13,569
% var. 2020/19	-10.1	0.2	-7.9	3.9	1.8
Net capital stock per labour unit ²					
euros	125,000	160,987	42,817	321,680	279,172
% var. 2020/19	0.8	11.5	8.1	12.7	11.6

* Current values.

² Net of depreciation.

¹ Before investments in housing.

Source: based on ISTAT data.

trend in 2020, with a reduction of 6.7% compared to the previous year.

Investments expressed in labour units amounted to €7,510 in 2020, which were also down on the previous year (-10.1%). This is equivalent to approximately half the value reported for the same ratio for the economy as a whole (€13,569). The

manufacturing industry allocated €19,298 per labour unit to new investments, showing a higher propensity for capitalisation than the agricultural sector and a slight increase compared to 2019 (0.2). For the services sector too, the ratio was up on 2019 (+3.9%), with investment per labour unit amounting to €12,808.

The ratio of capital stock (net of depreciation) per labour unit showed even more encouraging trends for all production sectors, with significant increases, with the exception of the agricultural sector, which remained more or less constant at €125,000 per unit (+0.8%).

During 2020, bank loans to the agricultural sector remained at similar levels to the previous year, increasing from € 39,944 million to € 40,026 million. The variation was only 0.2%, albeit a positive one, whereas a negative variation of 3.1% was recorded in 2019. All the various production branches showed substantial constancy in the provision of bank credit, leaving the percentage of loans to agriculture in relation to the rest of the economy more or less unchanged (5.3%).

However, this trend was not uniform across the country: the central and island regions recorded substantial reductions in the credit received, by 2.7% and 1.5% respectively, while the south, north-west and north-east regions recorded increases of 2.3%, 0.9% and 0.7% respectively.

The relationship between bank loans and the sector's main economic indicators paints a more encouraging picture: the percentage of the amount of credit compared to the value of agricultural production (meas-

ured at current prices) was around 67%, up from 64.9% in 2019. The relationship with the sector's added value also improved on the previous year, rising from 118.5 to 121.7%.

On the other hand, there were negative indications in relation to medium- and long-term loans, which revealed a contraction of 5.3% in their total amount, confirming the negative trend of the last few years (-4.9% in 2019 and -1.4% in 2018). As a result, the relationship between this type of

Bank loans to agriculture, forestry and fishing - December 2020

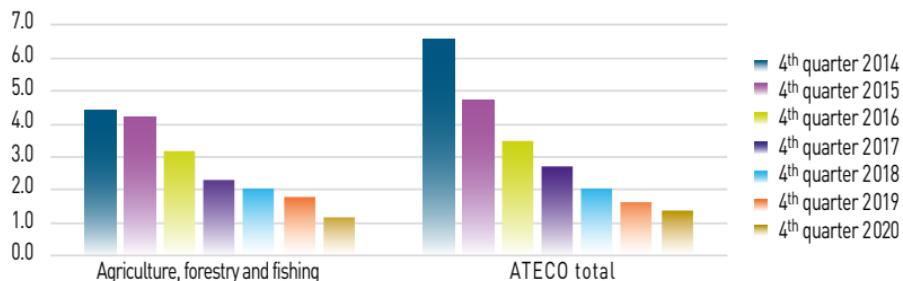
	Agriculture (€ mln)	% variations on previous year	% of total agricultural financing	% of total production branch financing ¹	% of agricultural production value ¹	% of agricultural added value ²
North-west	11,231	0.9	28.1	4.0	87.7	179.9
North-east	14,634	0.7	36.6	7.3	88.4	174.0
Centre	6,923	-2.7	17.3	4.2	77.5	129.7
South	4,836	2.3	12.1	6.5	34.1	57.9
Islands	2,403	-1.5	6.0	8.1	33.5	53.0
Total	40,027	0.2	100.0	5.3	67.1	121.7

¹Output, at basic prices, of agriculture, forestry and fishing, expressed in current values.

²Added value of agriculture, forestry and fishing in current values.

Source: calculations based on Banca d'Italia and ISTAT data.

Annual loan impairment rate – adjusted default: used



Fonte: Banca d'Italia.

Medium- and long-term loans¹ to agriculture, amount as at December 2020

Description	Italy (€ mln)	2019/2020 (%)
Machinery and equipment	4,084	-1.5
Construction of rural buildings	3,466	-11.0
Purchase of rural real estate	2,767	-2.9
Total	10,317	-5.3
North-west	2,971	-49.3
North-east	3,369	-4.9
Centre	1,786	-12.8
South	1,544	-3.1
Islands	647	-2.5

¹ Excluding non-performing loans.

Source: calculations based on Banca d'Italia data.

financing and total lending to agriculture dropped from 27% to 26%. The reduction in absolute terms of medium- to long-term debt mainly concerned financing for the construction of rural buildings (-11%) and the purchase of rural real estate (-2.9%). Northern regions continued to hold the largest share of long-term funding (61.5%), although they experienced the sharpest decline in 2020, particularly in the north-west (50%), followed by the central regions with contractions of 12.8%.

By contrast, the quality of agricultural credit improved, continuing a long-term trend of reducing the flow of impaired loans. The impairment rate, meaning the number of new loans entering non-performing status compared to the existing stock of loans, increased from 1.8% at the end of 2019 to 1.2% in the same quarter of 2020.



ECONOMIC RESULTS OF AGRICULTURAL BUSINESSES

PRODUCTION AND INCOME

The total revenues of FADN farms in 2019 amounted to an average of €67,117. By subtracting the explicit costs, the average net income that remained available to the farmer and their household was €24,454, accounting for 36.4% of the farm's turnover.

Higher economic results were recorded in the northern regions, especially in Lombardy and Emilia-Romagna, as a consequence of a greater presence of intensive farms and industrial-type livestock enterprises.

Out of the expenses incurred, current costs had the greatest impact on farm revenues (41.5% on average), followed by distributed income (wages, social security charges and rent payable) at 16% and deferred costs (depreciation and provisions) at 8.4%.

Structural data and main economic results by district, farm averages 2019

UAA	LU	WU	FWU	GSP	Current costs	Deferred costs	Distributed income	Non-core activities	Net income	
									ha	no.
Piedmont	21.7	17.7	1.5	1.3	94,620	45,308	6,695	11,304	3,639	34,952
Valle D'Aosta	41.9	23.4	2.1	1.7	67,449	28,048	10,404	13,143	12,260	28,114
Lombardy	22.5	56.0	1.5	1.3	134,494	70,764	5,969	15,667	-560	41,533
Liguria	4.4	2.2	1.3	1.1	51,624	18,674	5,053	7,071	538	21,364
Alto Adige	9.0	8.3	1.6	1.2	74,174	29,291	11,123	13,772	441	20,429
Trentino	6.5	7.3	1.2	1.0	59,907	17,445	5,942	7,361	4,023	33,182
Veneto	13.5	28.2	1.4	1.1	94,306	42,929	8,686	12,273	2,098	32,515
Friuli Venezia Giulia	17.4	22.1	1.5	1.2	92,228	44,044	9,449	11,650	1,969	29,054
Emilia-Romagna	24.6	12.6	1.5	1.1	109,774	49,036	6,407	16,824	364	37,871
Tuscany	22.8	5.1	1.7	1.3	83,749	34,163	8,908	15,475	616	25,819
Umbria	24.1	12.7	1.3	0.9	63,440	27,241	5,420	11,189	4,064	23,654
Marche	25.8	10.3	1.2	1.1	52,914	22,132	4,876	8,096	2,070	19,879
Lazio	18.5	10.1	1.5	1.0	65,898	23,818	7,573	13,958	2,856	23,405
Abruzzo	12.9	5.5	1.3	1.1	42,717	15,318	4,108	7,304	927	16,914
Molise	20.4	10.8	1.2	1.1	44,916	18,011	4,116	6,589	2,701	18,901
Campania	12.2	9.6	1.2	0.9	46,604	16,603	3,954	7,663	2,245	20,630
Puglia	14.9	2.3	1.2	0.7	49,575	17,902	4,006	9,264	698	19,102
Basilicata	31.6	7.8	1.5	1.1	53,695	19,523	4,303	9,009	1,674	22,534
Calabria	9.2	2.3	1.4	0.9	32,802	7,860	3,722	8,580	1,338	13,978
Sicily	17.5	4.8	1.1	0.7	38,365	12,482	3,998	8,327	1,061	14,619
Sardinia	39.6	18.0	1.1	1.0	45,414	17,635	4,572	6,524	4,014	20,698
Italy	18.5	12.9	1.3	1.0	67,117	27,876	5,670	10,745	1,628	24,454

Source: Italian FADN.

Structural and economic indicators by district, 2019

	GSP/ha	GSP/LU	GSP/WU	NI/FWU	NI/GSP (%)	NI/HA	NI/LU
Piedmont	4,367	5,356	61,815	27,609	37	1,613	1,978
Valle D'Aosta	1,609	2,879	32,349	16,661	42	671	1,200
Lombardy	5,988	2,403	92,683	33,015	31	1,849	742
Liguria	11,842	23,715	40,505	19,898	41	4,901	9,814
Alto Adige	8,262	8,988	45,612	17,632	28	2,275	2,475
Trentino	9,279	8,249	51,220	32,856	55	5,139	4,569
Veneto	7,008	3,339	69,153	29,171	34	2,416	1,151
Friuli Venezia Giulia	5,296	4,165	62,905	23,750	32	1,668	1,312
Emilia-Romagna	4,458	8,721	71,887	33,335	34	1,538	3,009
Tuscany	3,674	16,430	49,661	20,534	31	1,133	5,065
Umbria	2,635	4,981	50,583	25,541	37	983	1,857
Marche	2,055	5,155	42,994	17,486	38	772	1,937
Lazio	3,558	6,520	43,414	23,261	36	1,264	2,316
Abruzzo	3,304	7,804	33,282	15,098	40	1,308	3,090
Molise	2,203	4,178	36,484	17,847	42	927	1,758
Campania	3,809	4,852	38,865	23,385	44	1,686	2,148
Puglia	3,323	21,529	43,068	27,776	39	1,280	8,295
Basilicata	1,697	6,841	35,438	20,159	42	712	2,871
Calabria	3,554	14,281	23,757	14,991	43	1,514	6,086
Sicily	2,190	7,931	35,280	19,925	38	835	3,022
Sardinia	1,147	2,528	40,194	20,800	46	523	1,152
Italy	3,632	5,213	50,315	24,380	36	1,323	1,899

Source: Italian FADN.

Structural data and main economic results by type of farming (TF), farm averages 2019

	UAA	LU	WU	FWU	Farm revenue	Current costs	Deferred costs	Distributed income	Non-core activities	Net income
									ha	no.
TF Plant crops	Cereal crops	29.3	0.1	1.0	52,620	24,899	4,435	7,454	545	16,377
	Horticulture	3.1	0.2	2.2	106,075	47,023	6,153	23,231	-787	28,882
	Fruit growing	8.3	0.0	1.5	56,537	19,229	5,118	12,665	1,489	21,013
	Viticulture	8.3	0.1	1.2	56,807	18,504	5,747	9,594	1,444	24,407
	Olive growing	10.9	0.0	1.2	33,775	10,454	3,866	7,967	1,962	13,450
TF Livestock	Dairy cattle	29.3	67.8	1.8	176,089	78,649	12,618	16,815	3,676	71,681
	Sheep and goats	42.9	27.2	1.3	47,196	16,403	5,371	6,693	4,677	23,407
	Mixed cattle	34.5	38.2	1.2	70,615	35,974	7,309	7,987	3,690	23,035
	Granivores	19.5	367.9	2.3	328,793	211,301	12,697	25,432	400	79,762
	Mixed livestock	15.8	23.2	1.3	45,964	20,393	6,612	8,414	208	10,754
	Mixed: crops and livestock	22.6	14.1	1.4	61,751	27,983	5,565	9,953	1,689	19,940

Source: Italian FADN.

Structural and economic indicators by TF, 2019

	GSP/ha	GSP/LU	GSP/WU	NI/FWU	NI/GSP (%)	NI/ha	NI/LU	
TF Plant crops	Cereal crops	1,799	437,872	53,038	17,571	31	560	136,282
	Horticulture	34,680	687,943	47,581	22,996	27	9,442	187,310
	Fruit growing	6,819	1,552,456	38,817	23,090	37	2,534	576,993
	Viticulture	6,819	615,932	46,697	27,843	43	2,930	264,630
	Olive growing	3,107	891,199	29,030	16,573	40	1,237	354,909
TF Livestock	Dairy cattle	6,016	2,599	95,986	47,725	41	2,449	1,058
	Sheep and goats	1,100	1,737	36,663	20,131	50	545	861
	Mixed cattle	2,046	1,851	57,246	20,375	33	667	604
	Granivores	16,881	894	143,241	48,833	24	4,095	217
	Mixed livestock	2,917	1,982	36,112	9,613	23	682	464
Mixed: crops and livestock		2,732	4,372	44,626	17,045	32	882	1,412

Source: Italian FADN.

PLANT PRODUCTION TRENDS

Farms specialising in horticulture, which are characterised by small areas but a high level of labour, record, on average, for the main plant species, the highest production values as well as the highest values of land factor productivity and profitability. In contrast, specialised ce-

real farms are characterised by a large average size in terms of land coverage, although this does not correspond to a high level of economic performance.

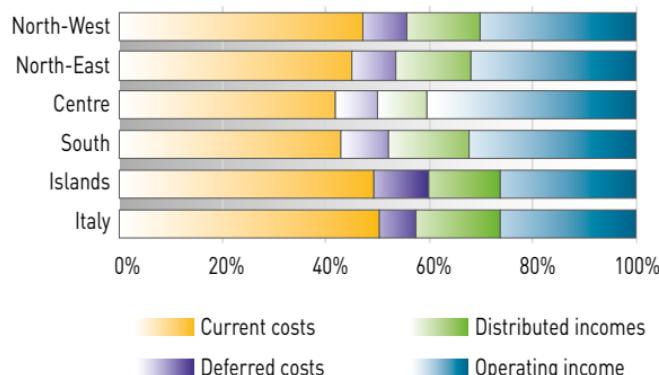
Farms in the fruit and wine sectors earn an average revenue of approx. €57,000 for an area of just over 8 hectares. How-

ever, wineries perform significantly better on profitability, work productivity and family work remuneration. On the contrary, olive growing shows more modest economic results, especially in terms of work productivity.

Structural and economic data by district, TF cereal crops: 2019

	UAA ha	WU no.	GPS/ha	GSP/WU euro	NI/fwu
North-West	33.6	1.3	2,428	64,007	18,572
North-East	21.2	0.8	1,901	47,663	12,193
Centre	32.8	1.1	1,418	43,431	15,511
South	29.9	0.8	1,392	49,520	23,935
Islands	44.9	0.9	1,100	57,677	24,831

Specialist cereal farms: % composition of farm revenue, 2019

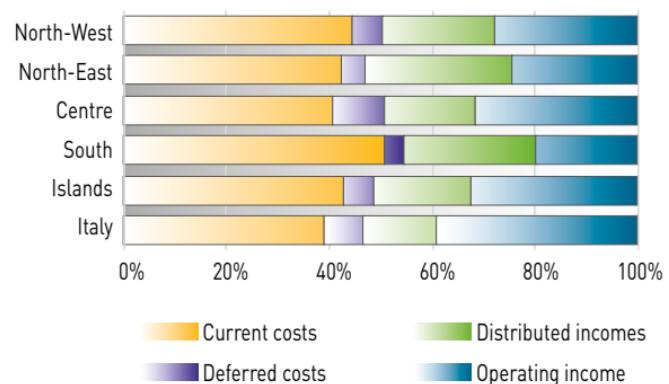


Source: Italian FADN.

Structural and economic data by district, TF horticulture: 2019

	UAA ha	WU no.	GPS/ha	GSP/WU euro	NI/fwu
North-West	1.6	1.5	36,322	39,882	17,803
North-East	6.0	2.6	25,780	59,281	26,685
Centre	2.4	3.0	64,589	52,383	22,602
South	3.6	2.1	26,292	44,996	27,015
Islands	3.1	2.3	30,114	40,387	23,876

Specialist horticultural farms: % composition of farm revenue, 2019

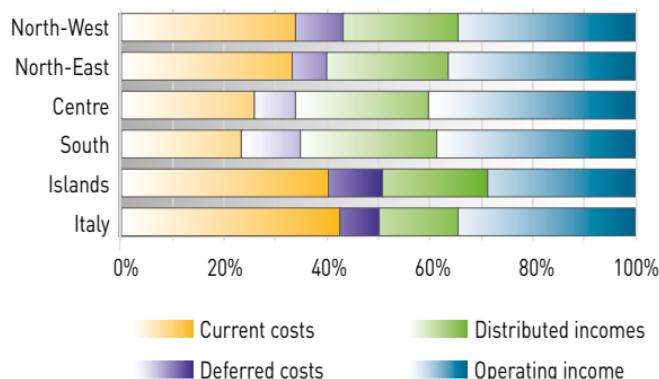


Source: Italian FADN.

Structural and economic data by district, TF fruit growing: 2019

	UAA ha	WU no.	GPS/ha	GSP/WU euro	NI/fwU
North-West	8.1	1.3	8,245	50,543	24,825
North-East	8.3	1.7	9,711	48,586	23,114
Centre	11.3	1.8	5,765	36,467	27,822
South	6.6	1.4	6,335	29,872	22,592
Islands	9.5	1.3	4,555	34,661	20,159

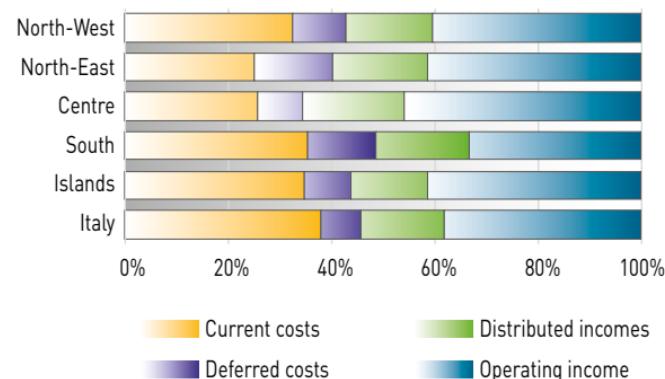
Specialist fruit growing farms: % composition of farm revenue, 2019



Structural and economic data by district, TF viticulture: 2019

	UAA ha	WU n.	GPS/ha	GSP/WU euro	NI/fwU
North-West	8.8	1.9	10,517	49,820	33,621
North-East	6.7	1.3	10,836	56,415	30,325
Centre	14.6	1.6	5,924	54,792	28,320
South	6.6	1.1	5,919	37,144	26,769
Islands	9.2	0.8	2,969	32,780	18,251

Specialist viticulture farms: % composition of farm revenue, 2019



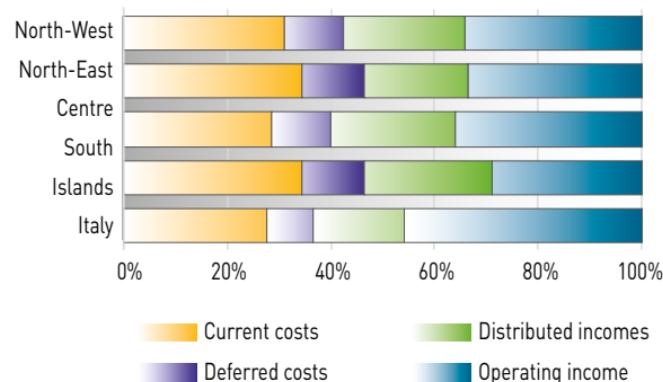
Source: Italian FADN.

Source: Italian FADN.

Structural and economic data by district, TF olive growing: 2019

	UAA ha	WU no.	GPS/ha	GSP/WU euro	NI/fwu
North-West	6.1	1.1	6,440	36,665	22,221
Centre	12.0	1.4	4,342	37,768	17,182
South	10.1	1.2	2,952	25,620	15,590
Islands	13.6	0.9	2,295	33,420	20,222

Specialist olive growing farms: % composition of farm revenue, 2019



Source: Italian FADN.

LIVESTOCK PRODUCTION TRENDS

Among livestock sectors, farms specialising in granivores stand out for their particularly high level of economic results, mainly due to the management of large (368 LU per farm on average) and intensive (19 LU/ha on average) livestock farms.

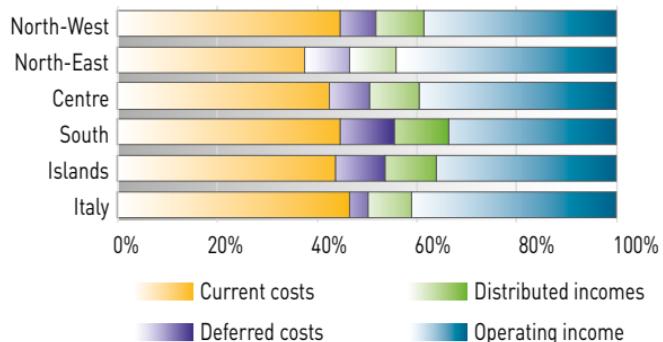
High levels of economic results, but lower than in the granivores sector, are also recorded by farms specialising in dairy cattle. In terms of average farm turnover and work productivity, mixed dairy and beef farms, which are generally more extensive, follow next. Farms specialising in

sheep and goat breeding, which are mostly extensive (0.6 LU/ha), have low average revenues, but show a greater ability to translate part of the revenues into income: as much as 50% of the turnover.

Structural and economic data by district, TF dairy cattle: 2019

	UAA	LU	WU	GSP/HA	GSP/LU	GSP/WU	NI/FWU
	ha	no.		euro			
North-West	39.6	102.4	2.1	7,018	2,713	134,274	66,228
North-East	24.4	47.9	1.7	5,846	2,980	82,543	39,622
Centre	35.5	75.0	2.1	5,073	2,403	86,636	46,914
South	18.8	64.6	1.7	6,447	1,881	71,589	36,609
Islands	71.9	76.0	1.8	2,068	1,956	83,593	50,933

Specialist dairy farms: % composition of farm revenue, 2019

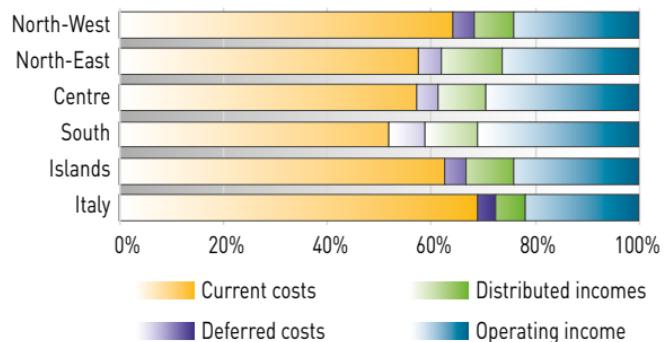


Source: Italian FADN.

Structural and economic data by district, TF granivores: 2019

	UAA	LU	WU	GSP/HA	GSP/LU	GSP/WU	NI/FWU
	ha	no.		euro			
North-West	25.5	469.1	2.3	17,524	952	197,812	52,806
North-East	17.9	487.0	2.9	22,608	831	141,259	55,873
Centre	18.6	238.2	1.7	8,677	679	96,493	42,927
South	10.7	114.7	2.0	13,391	1,254	73,569	28,349
Islands	19.4	72.7	1.5	5,239	1,401	67,995	29,397

Specialist granivore farms: % composition of farm revenue, 2019

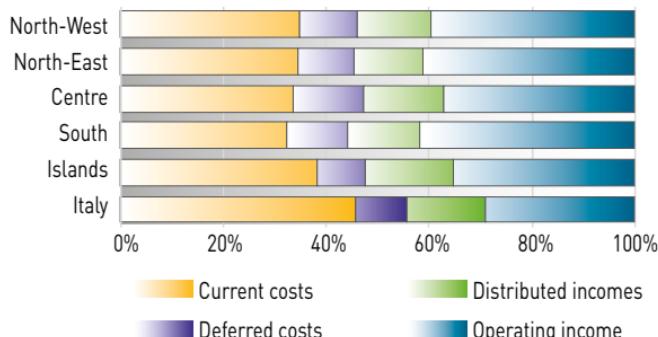


Source: Italian FADN.

Structural and economic data by district, TF sheep and goats: 2019

	UAA	LU	WU	GSP/HA	GSP/LU	GSP/WU	NI/FWU
	ha	no.		euro			
North-West	22.7	17.2	1.5	1,643	2,171	25,173	10,145
North-East	23.4	16.3	1.3	2,202	3,162	40,384	21,602
Centre	38.4	31.2	1.4	1,636	2,009	43,737	23,127
South	31.9	20.5	1.3	1,060	1,654	25,676	12,970
Islands	54.7	31.7	1.2	910	1,568	41,523	24,792

Specialist sheep and goat farms: % composition of GSP, 2019

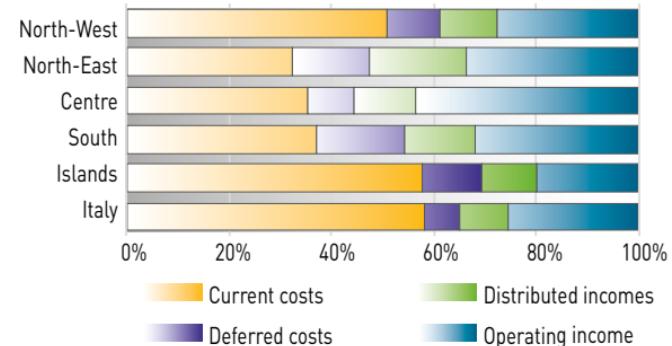


Source: Italian FADN.

Structural and economic data by district, TF mixed cattle: 2019

	UAA	LU	WU	GSP/HA	GSP/LU	GSP/WU	NI/FWU
	ha	n.		euro			
North-West	28.9	51.3	1.4	3,272	1,841	68,197	20,383
North-East	24.2	48.6	1.4	5,530	2,746	94,649	27,002
Centre	29.1	26.3	1.2	1,566	1,735	39,364	17,942
South	35.7	27.7	1.1	1,227	1,582	38,356	20,733
Islands	50.3	28.7	1.0	654	1,147	31,845	15,955

Specialist mixed cattle farms: % composition of farm revenue, 2019

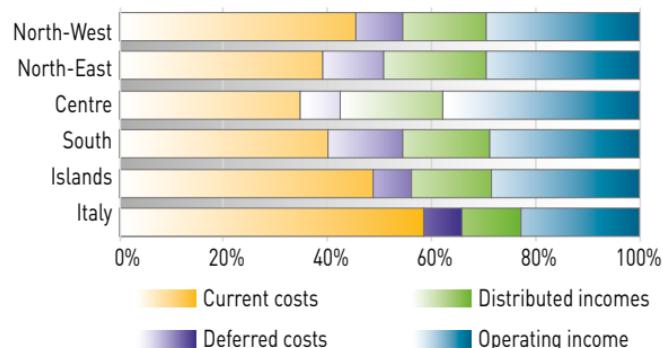


Source: Italian FADN.

Structural and economic data by district, TF mixed crop and livestock farms: 2019

	UAA	LU	WU	GSP/HA	GSP/LU	GSP/WU	NI/FWU
	ha	no.		euro			
North-West	18.2	13.0	1.1	3,393	4,730	57,874	14,455
North-East	22.2	26.8	1.7	5,286	4,365	67,572	24,419
Centre	24.0	11.7	1.4	2,271	4,643	38,225	14,390
South	19.5	9.5	1.4	2,091	4,296	28,792	15,473
Islands	40.3	13.3	1.2	1,112	3,365	38,263	15,922

Mixed crop and livestock farms: % composition of farm revenue, 2019



Source: Italian FADN.

ITALIAN AGRICULTURE IN THE EUROPEAN CONTEXT

The FADN makes it possible to compare the economic performance of farms in different EU countries for each production sector, while taking into account the major differences that exist with regard to production factors and agro-climatic contexts. The comparison presented here concerns the three-year period 2017–2019.

Italy showed excellent economic results in the livestock sector, in line with those achieved by countries with more advanced agriculture. All the productivity and profitability indicators considered were above the European average in the four sectors in question: dairy cattle, mixed cattle, granivores and sheep and goats (except for the value of production/LU in the granivores sector). In the plant sector, despite producing a good economic performance, our agriculture is conditioned by the modest structural endowment in terms of UAA and labour units, which reduces its competitive capacity.

In dairy farming, Denmark stood out as having the highest labour productivity and family profitability values, followed by the Netherlands. Italy ranked first for land factor productivity and profitability. In the mixed cattle sector (meat and milk), the Netherlands, which is characterised by intensive livestock farming (livestock density 6 LU/ha against an EU average of 1 LU/ha), stood out for its high labour productivity (2.6 times the EU average) and land productivity (6.5 times the EU average). On the other hand, Italy ranked first for the remuneration of family work.

In the granivore sector too, characterised throughout the EU by high livestock densities (9 LU/ha on average), the Netherlands ranked first in terms of land and labour productivity and land profitability, with results well above the EU average. Italy ranked second, after Denmark, for profitability of family work.

Farms specialised in sheep and goat farm-

ing are extensive (EU average density of 0.8 LU/ha). In this sector, the UK recorded the highest labour productivity, followed by Germany, France, Spain and Italy.

Among cereal farms, which on average have larger areas than other planting arrangements, the best productivity results were reported in the UK, Sweden, Germany and France. Italy, despite its smaller structural size, showed good economic performance, above the EU average, and ranked first for land profitability.

In the horticultural sector, Dutch companies were the best performers; Italy was above the European average for profitability indicators.

In fruit growing, UK farms recorded the best land and labour productivity, followed by Germany and France, while Italy had the best land profitability.

France demonstrated the best performance in productivity and labour profit-

ability for wine specialisation, followed by Germany and Italy¹.

In olive-growing, Spain stood out for its high labour productivity and family labour remuneration values, well above the EU average; Italy recorded the best result for land factor indicators.

¹ The performance of non-wine producing countries may have distorted the average EU wine sector result.

Specialist dairy farms: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/LU	GP/WU	NR/HA	NR/LU	NR/FWU
Austria	3,305	2,608	52,156	1,145	903	18,433
Belgium	4,551	2,050	144,400	1,386	624	45,524
Bulgaria	1,794	1,017	15,447	818	464	10,777
Denmark	5,737	3,509	302,744	639	391	94,199
Finland	2,772	3,444	97,300	454	564	19,815
France	2,275	1,932	113,695	460	391	26,795
Germany	3,624	2,455	134,550	796	539	42,129
Ireland	3,527	1,643	134,234	1,273	593	58,332
Italy	6,268	2,571	112,745	2,757	1,131	59,962
Netherlands	7,524	3,109	226,187	1,429	590	51,309
Poland	1,935	1,576	24,061	901	734	11,548
United Kingdom	4,069	2,123	173,437	693	362	51,095
Romania	2,006	1,876	10,800	1,174	1,097	6,655
Spain	5,558	2,195	95,018	1,555	614	35,532
Sweden	3,011	3,277	176,749	349	380	32,800
EU 28	3,343	2,279	77,271	875	596	24,672

Specialist mixed cattle farms: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/LU	GP/WU	NR/HA	NR/LU	NR/FWU
Austria	1,763	1,923	40,607	528	576	12,468
Belgium	2,344	1,174	83,979	583	292	21,349
Czech Republic	485	1,000	24,504	216	445	21,178
France	919	838	70,654	207	189	17,173
Germany	1,828	3,269	88,423	308	551	17,753
Greece	2,332	571	21,515	1,478	362	16,747
Ireland	922	760	36,724	351	290	14,433
Italy	1,899	1,450	58,743	965	737	32,716
Netherlands	7,314	1,149	120,402	604	95	10,944
Poland	794	879	9,780	332	367	4,142
Portugal	454	735	16,359	347	562	13,846
United Kingdom	1,103	987	80,437	144	128	12,487
Romania	1,461	1,152	9,918	767	605	5,460
Spain	799	1,952	42,536	381	929	23,128
Sweden	1,249	2,146	95,465	96	165	8,397
EU 28	1,122	1,063	46,713	323	307	14,978

Source: based on FADN database.

Specialist granivore farms: average farm results in € (three-year period 2017–2019)

	GP/HA	GP/LU	GP/WU	NR/HA	NR/LU	NR/FWU
Austria	6,750	1,975	146,531	1,772	518	40,471
Belgium	28,148	1,141	424,070	5,357	217	84,654
Bulgaria	20,854	1,253	56,698	4,428	266	85,559
Croatia	6,468	687	32,568	1,118	119	7,049
Denmark	7,926	1,459	344,256	568	105	99,279
France	8,532	1,002	213,300	1,000	117	35,027
Germany	6,148	1,523	218,791	692	171	37,636
Italy	17,697	680	177,777	6,539	251	91,461
Netherlands	110,080	1,335	479,526	13,471	163	87,484
Poland	5,428	1,262	83,718	1,144	266	26,360
Portugal	44,724	727	91,291	7,506	122	30,991
United Kingdom	13,352	1,064	231,858	1,309	104	69,003
Romania	14,177	2,821	43,333	3,963	789	35,183
Spain	10,685	650	137,115	3,216	196	73,278
Hungary	16,439	1,475	95,070	1,990	179	40,328
EU 28	9,784	1,078	168,589	1,627	179	50,044

Specialist sheep and goat farms: average farm results in € (three-year period 2017–2019)

	GP/HA	GP/LU	GP/WU	NR/HA	NR/LU	NR/FWU
Bulgaria	974	736	7,819	752	568	8,174
France	1,098	1,731	60,452	322	507	19,729
Germany	1,450	2,481	68,220	408	698	26,526
Greece	1,870	1,123	22,348	1,030	619	14,591
Ireland	439	636	24,023	201	292	11,238
Italy	1,022	1,564	38,319	600	918	24,438
Portugal	375	730	9,976	332	647	10,032
United Kingdom	423	775	70,996	101	186	20,667
Romania	1,657	2,585	13,938	653	1,018	5,924
Spain	2,050	1,297	49,687	892	564	28,112
EU 28	895	1,184	29,785	355	470	13,567

Source: based on FADN database.

Specialist cereal crop farms: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/WU	NR/HA	NR/FWU
Bulgaria	1,553	41,318	264	39,291
Czech Republic	1,037	66,746	152	24,497
Denmark	2,094	176,456	-33	-4,660
Finland	712	80,656	171	20,120
France	1,137	106,538	194	20,214
Germany	1,214	115,006	153	22,672
Italy	1,282	81,681	620	20,717
Latvia	640	50,186	114	16,826
Lithuania	673	36,137	182	12,797
Poland	842	17,696	270	6,177
United Kingdom	1,357	144,263	281	47,401
Romania	772	33,130	337	21,099
Slovakia	953	61,955	26	12,011
Spain	574	40,665	267	21,385
Sweden	1,183	127,274	82	11,779
Hungary	1,046	59,586	376	42,884
EU 28	977	50,892	253	17,405

Specialist horticulture farms: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/WU	NR/HA	NR/FWU
Belgium	52,118	110,845	11,285	69,864
Bulgaria	12,719	11,384	2,010	4,773
Denmark	45,399	122,676	3,101	79,583
Finland	37,521	199,781	3,847	33,867
France	27,848	72,928	5,317	38,435
Germany	47,418	71,393	7,999	45,830
Greece	20,878	26,437	7,421	18,124
Italy	27,756	58,521	10,446	42,617
Lithuania	4,493	25,843	1,604	20,227
Netherlands	94,624	145,184	14,134	115,636
Poland	11,022	21,596	2,951	9,538
Portugal	9,429	21,707	3,860	12,083
United Kingdom	48,618	73,070	3,958	51,252
Romania	6,105	6,920	1,767	2,273
Spain	23,422	51,122	9,331	57,699
Hungary	11,399	36,822	3,523	36,317
EU 28	31,506	61,675	7,085	34,820

Source: based on FADN database.

Specialist fruit farms: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/WU	NR/HA	NR/FWU
France	8,251	49,798	1,819	31,892
Germany	10,082	55,141	1,661	23,471
Greece	4,850	43,334	2,362	13,747
Italy	6,775	40,650	3,403	30,066
Poland	5,023	11,505	1,387	4,269
Portugal	5,658	22,049	2,845	22,123
United Kingdom	10,107	62,189	583	33,071
Romania	3,366	10,694	1,806	7,070
Spain	3,503	38,930	1,684	39,789
Hungary	2,758	22,352	1,501	29,717
EU 28	4,767	31,083	1,908	41,941

Specialist wine production: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/WU	NR/HA	NR/FWU
Austria	6,158	52,456	1,647	18,570
France	9,447	87,853	2,513	48,617
Germany	12,473	65,692	4,630	37,506
Greece	3,179	21,014	1,596	13,475
Italy	7,999	57,558	4,212	40,457
Portugal	5,114	29,702	2,292	21,732
Romania	3,326	14,208	1,250	11,564
Spain	2,003	32,216	1,123	27,813
Hungary	4,925	27,076	1,649	24,580
EU 28	12,975	57,479	4,949	35,874

Specialist olive farms: average farm results in € (three-year period 2017-2019)

	GP/HA	GP/WU	NR/HA	NR/FWU
Greece	2,217	14,722	1,187	9,684
Italy	2,389	25,250	1,484	22,101
Portugal	1,596	22,718	763	19,414
Spain	1,951	39,695	1,214	45,589
EU 28	2,062	27,602	1,229	24,333

Source: based on FADN database.



FOOD INDUSTRY

PRODUCTION

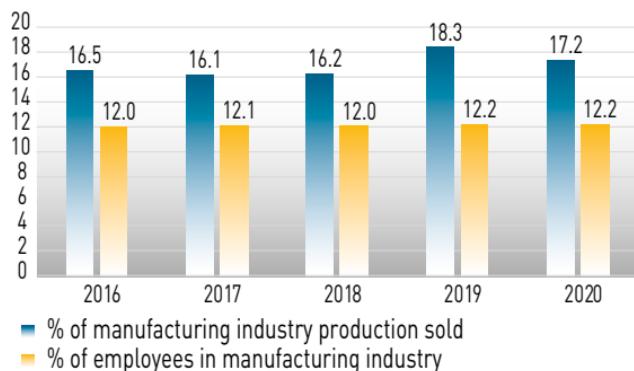
The food, beverages and tobacco industry plays a key role within the national manufacturing sector. In 2020, it accounted for approx. 17% of production value and 12% of employment. Compared to 2019, the number of employees decreased by almost one percentage point to around 479,000, while the sold production value recorded a

negative variation of 6%, falling to €117.4 billion.

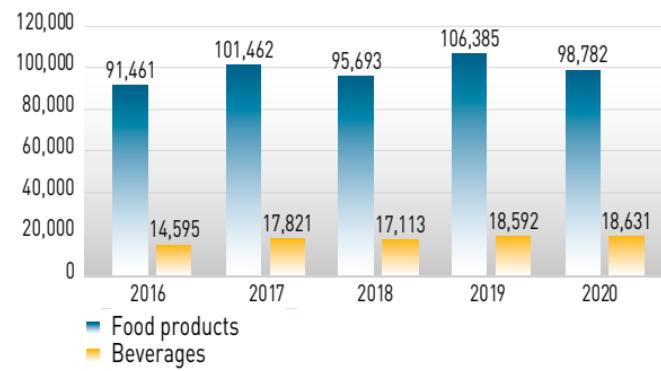
The value of food production, which accounts for approx. 84% of the industry, decreased by 7% compared to 2019, marking a setback after the upward trend of the last five years. This negative performance can be attributed to meat processing and pres-

ervation (-25%), the dairy industry (-7%), and fruit and vegetable preservation and processing (-4%), which were penalised by restrictions and difficulties resulting from the COVID-19 pandemic. On the other hand, the sold production of grain processing, starch and starch products performed well (+14%).

Food, beverages and tobacco as a percentage of total manufacturing output sold and employment (%)



Dynamics of production sold (€ millions)



Source: ISTAT, Industry and National Accounting.

Source: ISTAT, Industry.

Food and beverage industry production sold, 2020

	Production sold (€ mln)	Percentage of total %	% var. 2020/2019
Food products	98,782	84.1	-7.1
Processing and preservation of meat and production of meat-based products	21,753	18.5	-25.4
Processing and preservation of fish, crustaceans and molluscs	1,714	1.5	3.6
Processing and preservation of fruit and vegetables	9,656	8.2	-4.1
Production of vegetable and animal oils and fats	5,525	4.7	15.3
Milk and dairy industry	15,097	12.9	-6.7
Grain processing, production of starches and starch products	5,626	4.8	13.9
Production of baked and flour-based products	16,420	14.0	-5.4
Other food products	16,942	14.4	4.2
Animal feed products	5,673	4.8	2.5
Beverages	18,631	15.9	0.2
Distillation, rectification and blending of spirits	1,671	1.4	-15.5
Production of wine grapes	9,002	7.7	2.3
Production of cider	61	0.1	115.1
Production of other non-distilled fermented beverages	187	0.2	15.8
Beer	2,425	2.1	14.0
Soft drinks and mineral waters and other bottled waters	5,285	4.5	-3.8
Food and beverage total	117,413	100	-6.1

Source: ISTAT, Industry.

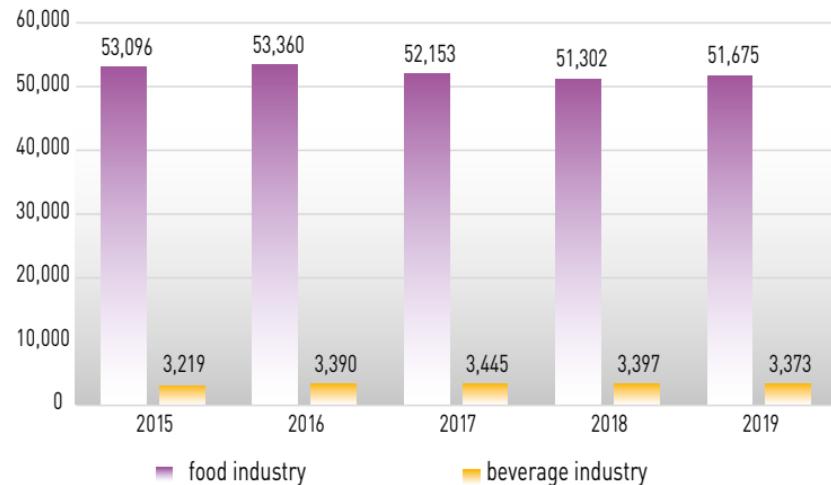
The sold production value of the beverage industry remained stable compared to 2019. Among the main beverage sectors, alcohol distillation, rectification and blending showed negative signs (-15%), while wine production increased by 2% and beer production by 14%, confirming it as a particularly dynamic sector.

COMPANIES AND TERRITORIAL DISTRIBUTION

Based on 2019 data, businesses in the food and beverage industry account for 14.8% of businesses in the manufacturing sector. They increased by 1% compared to 2018, thanks to the resilience of food businesses, while beverage businesses decreased by 1%.

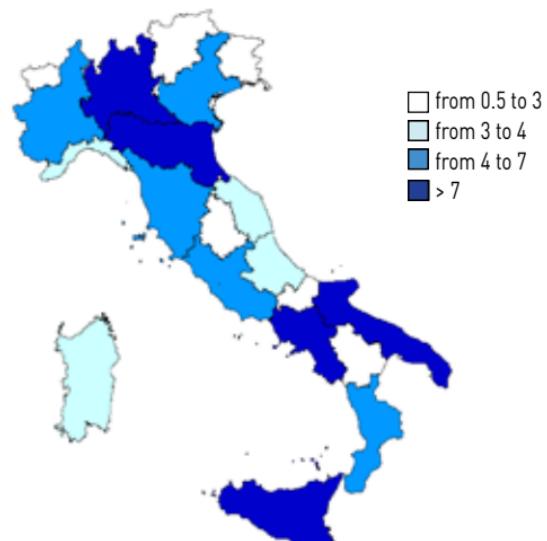
37.4% of food and beverage businesses are located in northern regions, 30% in southern regions and approx. 16% on the islands. Lombardy (10.2%), Campania (10.1%) and Sicily (12.9%) are the regions with the highest percentage of businesses in the sector. The specialisation index, measured at a regional level on the basis of the percentage of employees in the manufacturing sector as a whole, shows greater specialisation in the southern regions and islands than in the north.

Active companies (no.)

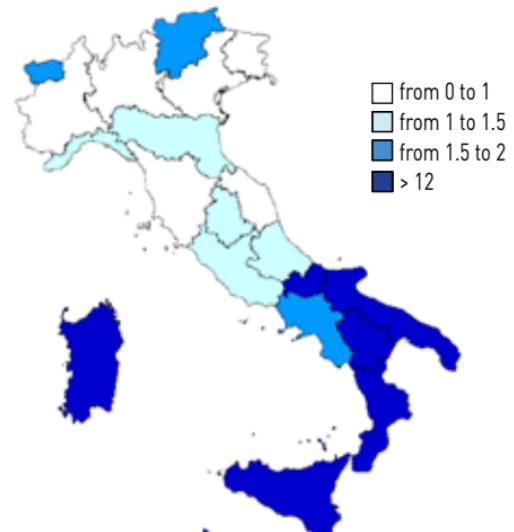


Source: ISTAT, Businesses.

Regional distribution of food and beverage companies, 2019 (%)



Food and beverage industry specialisation, 2019



Source: ISTAT, Businesses.

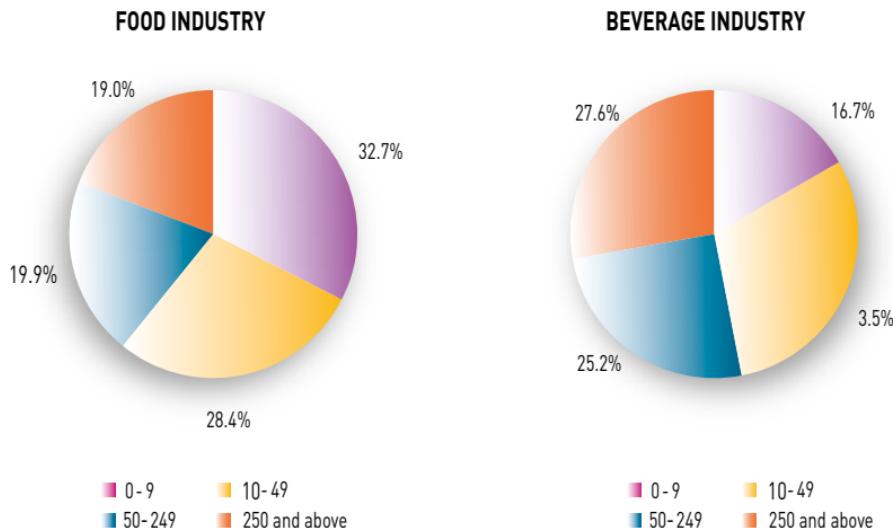
Source: ISTAT, Businesses.

EMPLOYEES

Businesses in the sector have an average of 8 employees per business, albeit with a marked regional variation: food and beverage businesses in Calabria have an average of 3.6 employees per businesses, while in Emilia-Romagna they have an average of 14.4 employees.

33% of employees in the food industry and 85.7% of businesses fall within the smallest category of up to 9 employees, while the same size category includes 17% of employees and 77.5% of businesses in the beverage industry, thus showing a higher concentration.

Employees by size class, 2019



Source: ISTAT.

COMPARISON WITH THE EU 28

When comparing Italy with the other EU 28 countries, the national agri-food sector represents about 11% of the added value of the food industry and employs

9.2% of the workforce. Italy accounts for approx. 20% of businesses and is in third place in terms of turnover size, accounting for 11.6%, after Germany and France

(18% and 17.5%). Italy's beverage sector accounts for 11.8% of turnover, 8.8% of employment and 12% of businesses in the EU 28.

Principal food industry indicators in EU 28 countries, 2018

	Businesses	Employees	Production value	Added value*	Turnover
	(.000 units)			(mio. euro)	
Austria	3,470	79,738	16,764	4,590	19,513
Belgium	5,123	89,584	36,981	6,970	39,829
Bulgaria	5,312	82,477	4,478	952	5,184
Cyprus	834	12,693	1,332	370	1,553
Croatia	2,721	51,631	3,762	4,043	4,595
Denmark	1,465	55,275	19,945	1,024	25,985
Estonia	626	13,328	1,559	357	1,715
Finland	1,596	35,775	9,037	2,207	9,375
France	51,288	623,057	149,283	34,386	178,559
Germany	26,543	910,429	163,985	39,701	185,173
Greece	15,164	124,921	11,812	2,916	13,731
Ireland	1,815	49,263	22,819	6,993	24,294
Italy	51,579	416,882	115,555	22,896	119,783
Latvia	1,079	21,312	1,568	369	1,678
Lithuania	1,649	38,523	3,538	778	3,831

* At factor cost.

The added value, turnover and business data for France refer to 2017.

Source: Eurostat.

	Businesses	Employees	Production value	Added value*	Turnover
	(.000 units)			(mio. euro)	
Luxembourg	121	5,304	738	248	781
Malta	366	2,980	344	92	N/A
Netherlands	6,203	127,302	65,548	11,078	70,651
Poland	18,307	435,667	53,426	10,837	59,744
Portugal	9,445	98,931	11,823	2,431	13,680
United Kingdom	8,224	392,340	89,140	25,837	96,142
Czech Republic	8,463	100,181	10,198	2,320	11,793
Romania	9,244	164,505	8,664	1,481	10,320
Slovakia	3,425	37,976	3,209	711	3,822
Slovenia	2,361	16,555	1,802	499	2,126
Spain	24,437	377,697	99,854	17,753	105,514
Sweden	3,480	58,000	13,933	3,469	16,709
Hungary	4,479	97,544	9,595	2,139	10,762
EU 28	265,094	4,519,870	913,597	N/A	1,026,034

VALUE OF THE AGRI-FOOD SYSTEM

In 2020, the agri-food system as a whole¹ – from the production of agricultural products to the retail distribution of food and beverages and catering – was worth around €512.3 billion in terms of turnover produced, accounting for 17% of the entire economy. Looking at its percentage composition, the food, beverages and tobacco industry produced 27.5% of the value, or €141 billion, followed by retail trade, with just over €137 billion, accounting for 27% of the value, and wholesale trade, with just over €138 billion. Agriculture with €59.6 billion and catering with €36.6 billion account for the remaining 11.6% and 7.1% respectively.

In 2020, the value of the agri-food system and its composition were affected by the lockdown imposed on economic activities

Composition of the agri-food system value chain (%)



Source: CREA-PB estimate based on ISTAT data.

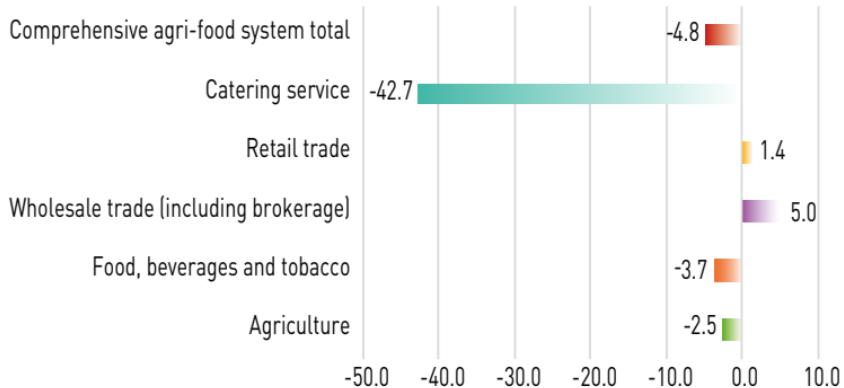
¹ Estimated using ISTAT data "Economic performance of businesses" and "National accounts". It should be noted that the overall value of the system, including the non-specialist wholesale and retail component, albeit food-dominated, may be overestimated.

in response to the pandemic. In the three-year period 2017–2019, catering accounted for an average of around 11.6%, as did agriculture, while wholesale and retail accounted for 25% each; the food, beverages

and tobacco industry produced 27% of the turnover. In 2020, the turnover value decreased by approximately 5% compared to 2019. The components that explain this negative performance are the catering in-

dustry, which suffered a loss of about 43% of turnover, followed by the food, beverages and tobacco industry with a reduction of 4%; the reduction in turnover in agriculture was more limited (-2.5%). The components that produced positive performances were wholesale (+5%) and retail (+1.4%).

Agri-food system turnover variation 2020/2019 (%)



Source: CREA-PB estimate based on ISTAT data.



DOMESTIC MARKET AND FOREIGN DEMAND

FOOD CONSUMPTION

In 2020, the average monthly expenditure of Italian households was €2,328 in current values, down sharply from 2019 (-9%). In real terms, expenditure fell by 8.8% when inflationary dynamics are taken into account (-0.2% change in the consumer price index).

In this moment of sharp decline, such a low contraction had not occurred since 1997, and only expenditure on food and on housing, water, electricity and other fuels remained unchanged. On average, €468 per month was spent on food and non-alcoholic beverages (20.1 of total ex-

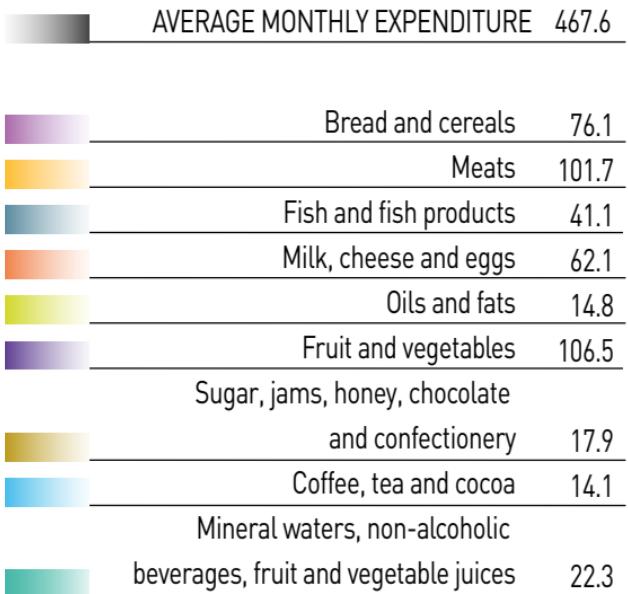
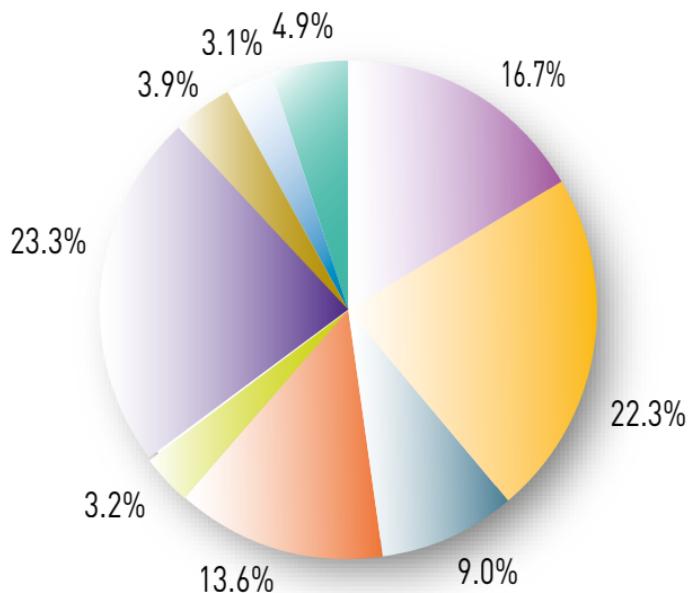
penditure), only slightly more than the €464 in 2019. The item most adversely affected by the restrictions imposed to combat the COVID-19 pandemic was accommodation and food services (-39%). In terms of food expenditure, the biggest increases were recorded for milk, cheese and eggs (+5.1% compared to 2019) and meat (+3.4%), while oils and fats (-7%), confectionery (-6.4%) and coffee, tea and cocoa (-5.1%) fell sharply.

The well-known territorial divides in spending behaviour were slightly reduced as a result of the measures to combat the

epidemic, which were more intense in the north of the country, where total expenditure fell by almost 10%. In the south and islands, food expenditure continued to account for a bigger share (25.2% and 24.5%) than in the north-west (17.9%) and north-east (18.1%).

According to ISMEA, household spending on food grew by 7.4% in 2020, marking the biggest increase in the last decade. Packaged products were the most widely purchased, especially in March when the pandemic spread and there was a tendency to hoard “store cupboard” products in particular.

Average monthly household expenditure on food products and non-alcoholic beverages (€), 2020



Source: ISTAT.

DISTRIBUTION

In 2020, the number of specialist and non-specialist food retail businesses in fixed locations increased slightly (+0.6%), totaling 180,486.

In the specialised retail sector, significant increases were recorded both for food and beverage outlets (+2.7%) and for some neighbourhood shops such as frozen food outlets (+3.9%) and greengrocers (+2.5%). However, there was a decline in the number of bakeries (-3.1%) and butchers' shops (-0.5%).

Large-scale retail outlets increased by 1.4%, with minimarkets (+1.1%) confirming their leadership with over 58,000 outlets. There was a slight increase in the number of large sales outlets, hypermarkets (+0.1%) and supermarkets (+0.1%),

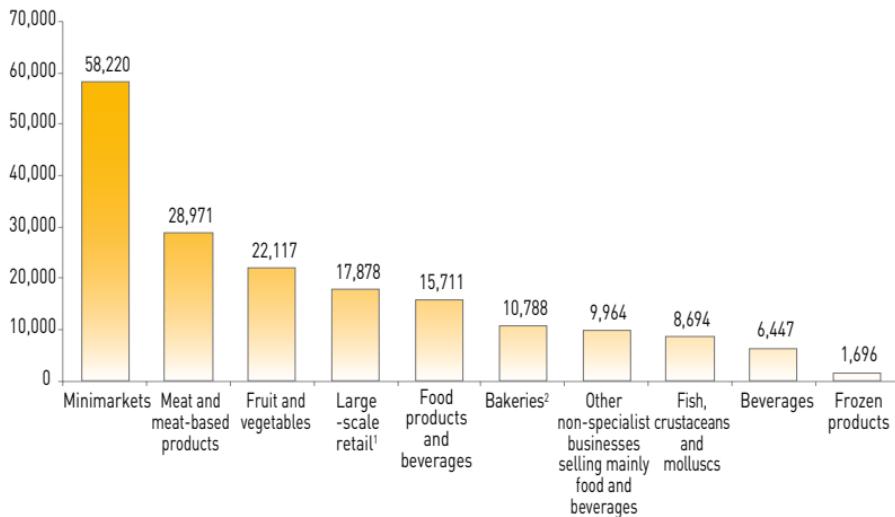
with a total national footprint of 188 m² per 1,000 inhabitants. Discount stores boosted their competitiveness, recording an additional 1.8% increase compared to 2019, with 58 m² per 1,000 inhabitants. The downward trend continued in terms of small supermarkets (-4.9%), the typical neighbourhood businesses with a surface area of less than 400 m² that are now only to be found in small towns and in hilly and mountainous areas, where they are often the only local food shops.

On a territorial level, the historical gap between the northern regions, where hypermarkets and large sales outlets dominate, and the central and southern regions, where discount stores and local shops are more widespread, was confirmed.

In 2020, the positive performance of household food consumption due to the pandemic led to an increase in volume (+5.7%) and value (+6.6%) of retail sales in the food sector (ISTAT). The increase in value was slightly higher for purchases from small shops (7.6%) than from large-scale retailers (7%), with a real boom in e-commerce, where the aggregate food/non-food figure recorded a 33.8% increase in value.

In 2020, despite the closures imposed by the quarantine, the itinerant food retail sector held its ground, shrinking by 1.4% in terms of numbers, with a total of 33,198 units, accounting for 18.9% of all itinerant businesses.

Food retail businesses in fixed locations, 2020



¹ Includes: hypermarkets, supermarkets, discount stores.

² Including confectionery and sugared almond shops.

Source: Osservatorio Nazionale del Commercio, Ministry for Economic Development (MISE).

CATERING

In 2020, household expenditure on catering services was estimated by FIPE (Italian Federation of Public Establishments) to be €54,405 million, a drop of 35.5% compared to the previous year, due to the closures put into place to tackle the COVID-19 pandemic.

Turnover generated by catering businesses, equivalent to €36.6 billion, plummeted by -43% compared to 2019, abruptly interrupting the buoyant growth trend of recent years. According to a FIPE survey, 97.5% of companies stated that their turnover had halved compared to 2019. As at 31 December 2020 the balance of

enterprises in the catering services sector was negative by about 13,000 units. By way of comparison, in 2010 there were more than 18,000 new business start-ups, while in 2020 there were only 9,190. A total of 335,883 companies are active in commercial and collective catering (catering and canteens), of which more than half are sole proprietorships.

The impact of the pandemic severely affected employment in the sector, which fell to 850,000, with a loss of 350,000 jobs. The biggest reduction in absolute terms affected restaurants (-140,738) and bars (-71,753). On the other hand,

closures drove the delivery, take-away and home food offerings, which were up 10%.

The freeze on redundancies partly offloaded the effects of the crisis onto employees with fixed-term or seasonal contracts, as the use of permanent contracts is widespread in the hospitality sector (67% of the total). The fall in the number of hours worked in the catering sector had a negative effect on sector's productivity, which fell to a historical low; the value per work unit in 2020 was €38,718, 44% lower than the overall figure for the national economy.

Firms active in catering services, 2020

Region	Catering services			Total
	Restaurants and mobile catering services	Bars and other similar establishments without a kitchen	Canteens and catering	
Piedmont	13,457	9,989	172	23,618
Valle d'Aosta	626	466	4	1,096
Lombardy	25,958	23,285	653	49,896
Trentino-Alto Adige	3,079	2,426	62	5,567
Veneto	13,838	11,613	179	25,630
Friuli-Venezia Giulia	3,762	3,272	38	7,072
Liguria	6,809	5,375	73	12,257
Emilia-Romagna	13,595	11,105	161	24,861
Tuscany	13,891	8,374	273	22,538
Umbria	2,647	2,014	58	4,719
Marche	5,241	3,186	73	8,500
Lazio	22,321	15,485	466	38,272
Abruzzo	5,162	3,528	82	8,772
Molise	995	881	21	1,897
Campania	17,994	14,812	393	33,199
Puglia	11,286	8,273	157	19,716
Basilicata	1,413	1,389	43	2,845
Calabria	6,299	4,522	129	10,950
Sicily	14,279	8,762	252	23,293
Sardinia	5,979	5,100	106	11,185
Italy	188,631	143,857	3,395	335,883

Source: FIPE Catering Report, 2021.

FOREIGN TRADE

In 2020, the agri-food sector showed greater resilience in international trade than other sectors, which were more affected by the effects of pandemic-related restrictions and the subsequent economic crisis. Agri-food imports amounted to €42.3 billion, while exports reached almost €45 billion for the first time. Compared to 2019, the decline in agri-food imports (-4.7%) was much smaller than the decline in total merchandise imports, while agri-food exports actually increased by 1.3% compared to 2019, albeit with a strongly differentiated trend in terms of goods.

These dynamics boosted the improvement in the agri-food balance, which, after reaching an equilibrium in 2019, became positive in 2020 (+€2.6 billion). Only five years ago, the structural deficit in the agri-food balance was as high as €5 billion. The geographical distribution of the agri-food trade in 2020 once again favoured the EU28 area, where 69.2% of purchases

Agri-food system and balance*

MACROECONOMIC AGGREGATES		2000	2019	2020
Total agri-food production ¹	(P)	67,899	91,467	90,409
Imports	(I)	25,358	44,405	42,314
Exports	(E)	16,867	44,363	44,939
Balance	(E-I)	-8,491	-42	2,625
Volume of trade	(E+I)	42,225	88,768	87,253
Apparent consumption	(C = P+I-E)	76,390	91,509	87,784

INDICATORS (%)		2000	2019	2020
Degree of self-sufficiency	(P/C)	88.9	100.0	103.0
Import propensity	(I/C)	33.2	48.5	48.2
Export propensity	(E/P)	24.8	48.5	49.7
Degree of commercial coverage	(E/I)	66.5	99.9	106.2

* € million in current values. The data relating to agri-food production also include "processed tobacco".

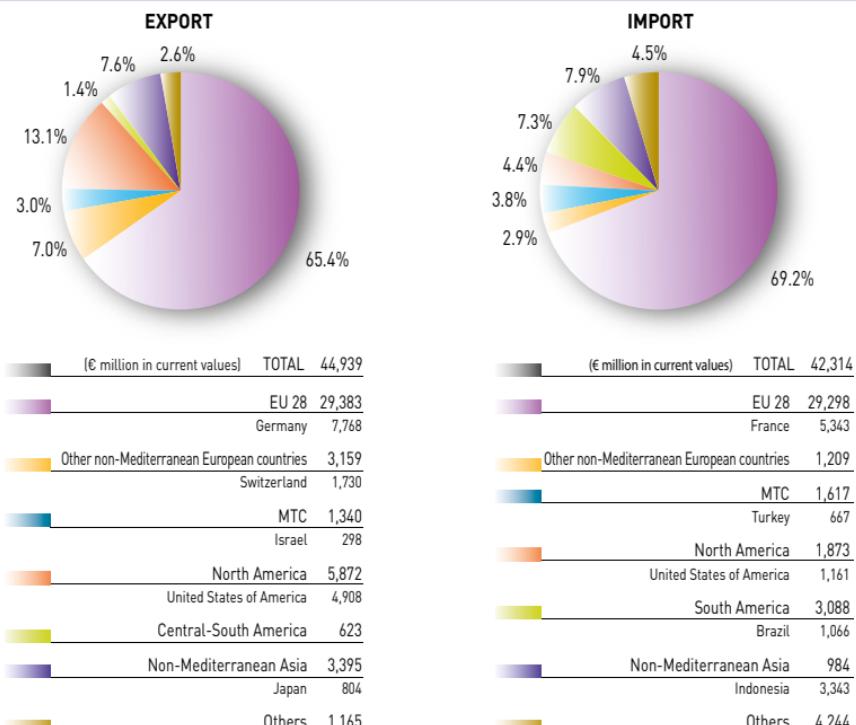
¹ Agriculture, forestry and fishing production and added value of the food industry at basic prices.

Source: CREA-PB calculations based on ISTAT data.

from abroad and 65.4% of sales were concentrated. The EU's share of imports decreased by more than one percentage point compared to 2019, while the percentages for other key non-EU import areas increased: Asia (+0.3%), South America (+0.3%) and North America (+0.6%). The North American area also gained shares on the export side, confirming its position as the main non-EU destination area, with a share exceeding 13% and growth in value of almost 6% compared to 2019.

In terms of imports, France, Germany, Spain and the Netherlands remained the top four suppliers of agri-food products to Italy, with a combined share of 43.7%. Most of the major suppliers recorded negative changes in value, ranging from -7.1% in the UK to -23.9% in Ukraine. Imports from Canada, Indonesia and Brazil, on the other hand, showed positive changes of 69.7%, 20.1% and 9% in value respectively. In terms of exports, the top four customer countries (Germany, France, USA, UK) accounted for almost 48% of

Italian agri-food trade by geographical area, 2020



Source: CREA-PB calculations based on ISTAT data.

Foreign trade by principal agri-food sectors (€ mln), 2020

	Imports	Exports	NB* (%)
Seeds	577.2	349.8	-24.5
Cereals	2,806.7	54.2	-96.2
Fresh vegetables and pulses	790.7	1,335.9	25.6
Dried vegetables and pulses	310.0	41.6	-76.4
Citrus fruit	419.9	244.2	-26.5
Tropical fruit	719.4	83.8	-79.1
Other fresh fruit	761.9	2,574.8	54.3
Dried fruit	1,406.9	560.4	-43.0
Unprocessed fibrous plants	51.6	7.2	-75.5
Oilseeds and oleaginous fruits	1,022.9	31.0	-94.1
Cacao, coffee, tea and spices	1,454.1	100.9	-87.0
Horticultural products	479.5	903.3	30.7
Unprocessed tobacco	125.4	260.9	35.1
Live animals	1,504.6	52.8	-93.2
Other livestock farm products	362.5	41.3	-79.6
Forestry products	497.5	129.8	-58.6
Fishing products	1,163.5	236.3	-66.2
Hunting products	26.7	3.7	-75.7
PRIMARY SECTOR TOTAL	14,481.1	7,011.7	-34.8
Rice	163.7	648.6	59.7
Cereal derivatives	1,347.4	5,953.1	63.1
Sugar	779.6	126.7	-72.0

	Imports	Exports	NB* (%)
Confectionery products	1,048.0	2,059.0	32.5
Fresh and frozen meats	4,076.4	1,111.0	-57.2
Prepared meats	348.1	1,798.0	67.6
Fish products	4,036.3	468.0	-79.2
Processed vegetables	1,074.5	3,108.8	48.6
Processed fruit	632.0	1,121.1	27.9
Dairy products	3,475.8	3,765.4	4.0
Oils and fats	3,570.6	2,137.1	-25.1
Oilcakes and feeds	1,963.3	1,266.5	-21.6
Other food industry products	2,209.3	4,568.2	34.8
Other non-food products	1,022.8	342.1	-49.9
FOOD IND. TOTAL (excluding beverages)	25,747.9	28,473.4	5.0
Wine	295.1	6,427.4	91.2
Musts	9.0	51.2	70.1
Other alcoholic beverages	1,233.7	1,516.9	10.3
Non-alcoholic beverages	229.0	1,176.8	67.4
BEVERAGES TOTAL	1,766.8	9,172.3	67.7
FOOD AND BEVERAGES IND. TOTAL	27,514.7	37,645.7	15.5
Other agri-food products (below threshold: 1-24)	317.8	281.3	-6.1
AGRI-FOOD BALANCE TOTAL	42,313.6	44,938.7	3.0

* Normalised Balance

Source: CREA-PB calculations based on ISTAT data.

Exports of "Made in Italy" agri-food products*

	2020 (€ million)	% variations 2020/2019	
		Current values	Quantity
Cereals	6.6	-12.6	-13.3
Fresh fruit	2,623.9	7.0	-3.3
Fresh vegetables	1,172.8	0.5	-0.7
Horticultural products	729.1	1.2	-0.8
AGRICULTURAL MADE IN ITALY	4,532.4	4.2	-2.5
Rice	648.6	13.5	12.3
Processed tomato	2,199.7	13.8	5.9
Fruit juices and cider	642.6	9.1	-3.8
Other vegetables or prepared or preserved fruit	1,285.7	0.7	2.2
Cured meats	1,706.2	1.9	-6.8
Cheese	2,087.4	-3.9	1.5
Olive oil	1,443.5	5.5	21.4
Packaged wine	6,019.0	-2.3	0.3
Bulk wine	376.6	-0.7	-11.2
Vinegar	282.5	4.7	-1.8
Mineral waters	538.7	-11.0	-9.2
Essences	134.7	-14.5	-3.2
Other processed products	1,190.4	7.9	14.0
PROCESSED MADE IN ITALY	18,555.8	1.6	1.4
Pasta	3,067.1	15.4	14.2
Baked goods	2,438.8	-0.9	1.7
Other cereal derivatives	239.9	5.9	2.6
Cocoa-based confectionery products	1,886.4	-2.8	-2.0
Ice creams	235.5	8.2	5.4
Coffee	1,402.4	-4.1	-6.7
Spirits and liqueurs	1,024.3	-9.3	2.0
FOOD INDUSTRY MADE IN ITALY	10,294.5	2.0	7.6
MADE IN ITALY TOTAL	33,382.7	2.1	2.1

* "Made in Italy" products are the subgroup of agri-food products that traditionally evoke the image of Italy.
Source: CREA-PB calculations based on ISTAT data.

the value of Italy's foreign sales. Generally speaking, exports to many of the main customers increased. In the case of Germany, Switzerland and Canada, this increase exceeded 7%, while there was a drop of more than 8% in the case of Spain, mainly due to lower sales of confectionery, bakery and dairy products.

As regards goods, the growth in exports concerned the primary sector (+0.9%) and the food industry (+1.9%), while the beverage sector suffered a drop of almost 3%. Meanwhile, in terms of imports, the contraction affected all sectors, although it was more marked for processed products (-5.9%) and beverages (-8.9%).

The effects of the pandemic on agri-food exports were differentiated by sector. The overall increase of 1.3% can be attributed to some of the main sectors, such as fresh fruit in the primary sector, processed vegetables (+11%) and cereal derivatives (+6.7%) in the food industry. In greater detail, it should be noted that in 2020 the restrictions imposed by the pandemic

boosted domestic consumption of pasta worldwide, leading to growth in Italian exports of close to 20%. On the other hand, foreign sales in other important sectors, such as confectionery and processed fruit, declined. Beverage exports were affected by the decline in the wine sector (-2.4% compared to 2019) and in other alcoholic drinks (-6.6%). In terms of imports, the contraction affected many of the main sectors. For the primary sector, there was a decline in dried fruit (-3.9%), cocoa, coffee, tea and spices (-5.9%) and fishery products (-20.5%). In the food industry, there were significant reductions in purchases in important sectors, such as

meat (-11.8%), fish products (-9.2%) and dairy products (-9.3%). Among beverages, imports of “other alcoholic drinks” fell in value by 9.4%.

Italian production accounted for 74.3% of Italy's agri-food exports, up compared to 2019, thanks to the bigger increase in export value: +2.1% compared to 1.3% for agri-food as a whole. This growth concerned both the primary component (+4.2%) and products of primary processing (+1.6%) and secondary processing (+2%). The biggest share of Italian-made exports can be attributed to products of primary processing, accounting for just under 56%. It should be noted that, within

this aggregate, exports of processed tomatoes and olive oil grew in value. On the other hand, as already mentioned, there was a fall in sales of beverages, including packaged wines and mineral waters. Exports of products of secondary processing accounted for more than 30% of total exports in the Italian-made aggregate and 22.9% of total agri-food exports. As already highlighted, pasta was the product within this aggregate to show the biggest increase in foreign sales. Meanwhile, exports fell in other key sectors, such as cocoa-based confectionery products and roasted coffee.



NUTRITION AND FOOD CULTURE

ORGANIC FARMING

There was a modest increase in the number of organic operators in 2020, up by 1.3% to 81,731. This was due to more organic farms leaving the certification and control system than joining it in many Italian regions. Only mixed producers increased significantly (+5.8%) while the number of exclusive producers and processors grew by 0.6%. In greater detail, there were more than 1000 mixed producers in three southern regions in particular, namely, Calabria, Sicily and Puglia, while there were almost 2000 in Tuscany, which was home to 1940 companies. However, there was a particularly severe decline in mixed producers in Friuli-Venezia Giulia (-38%).

On the other hand, 2020 was a fairly favourable year for the development of organic farming in terms of surface area. The overall organic UAA increased by 5.1%, although several regions, such as Piedmont, Valle d'Aosta, Lombardy, Veneto, Campania and Calabria, recorded a decrease. With the exception of Calabria,

these are all regions where the proportion of organic UAA to total UAA is lower, so an even greater effort will have to be made to achieve the target of 25% organic UAA by 2030 established in the Farm to Fork Strategy. Overall, the average incidence of the organic UAA rose from 15.8% in 2019 to 16.6% in 2020. The regions that exceeded the 25% target include two from central Italy, namely, Tuscany and Lazio, which joined Calabria and Sicily, both of which have had a higher incidence for some years now. Meanwhile, the Marche, Basilicata and Puglia regions were close to reaching the target. Tuscany also ranked among the most virtuous regions for the increase in size of its organically farmed area in 2020, together with Friuli-Venezia Giulia, Liguria and Sardinia. The average size of organic farms on a national level grew by one hectare, from 28.3 hectares in 2019 to 29.3 hectares in 2020, showing that it is primarily smaller farms in terms of UAA that are leaving the organic sector.

In 2020, the area undergoing conversion fell compared to the previous year (-9.4%) for the fourth consecutive year. This figure is also somewhat negative in consideration of the target of an organic UAA of 25% by 2030. The reduction in the UAA undergoing conversion affects all crop categories, but especially root crops, fruit crops including nuts, other permanent crops and protein, legume and grain crops, all with UAA contractions of more than 20%. Considering the entire aggregate certified organic area, plus areas undergoing conversion, a reduction is only observed in the UAA used for protein, leguminous, grain, root, citrus and other permanent crops. In contrast, all other crop categories show an increase, which is particularly evident in the case of other arable and industrial crops. Other increases were much more modest, except in the case of fodder crops and vines, which increased their organic UAA by more than 7%.

With regard to organic livestock, the num-

Organic operators by region, 2020

	Exclusive producers		Producers/processors		Exclusive processors		Total operators ¹	
	no.	% var. 2020/19	no.	% var. 2020/19	no.	% var. 2020/19	no.	% var. 2020/19
Piedmont	1,894	-2.3	634	5.8	595	3.1	3,186	0.2
Valle d'Aosta	29	-51.7	15	0.0	9	-40.0	53	-41.1
Lombardy	1,453	-3.1	533	7.0	1,126	-0.6	3,229	-0.3
Liguria	260	2.8	83	1.2	157	-4.3	523	0.8
Trentino-Alto Adige	2,329	2.2	307	0.0	479	4.4	3,136	2.4
Veneto	2,104	-8.3	653	7.9	986	-2.2	3,808	-4.1
Friuli-Venezia Giulia	632	9.7	91	-38.1	179	-5.8	910	-1.1
Emilia-Romagna	4,529	8.1	735	8.4	1,079	0.6	6,421	6.5
Tuscany	3,335	22.2	1,940	6.1	671	-0.1	5,987	13.6
Umbria	1,257	-15.9	367	-3.2	189	-5.0	1,824	-12.4
Marche	3,271	4.6	542	8.6	296	4.6	4,118	5.1
Lazio	4,338	7.3	622	10.7	504	0.0	5,484	7.1
Abruzzo	1,516	9.4	340	-0.3	291	4.3	2,150	7.0
Molise	361	-4.5	74	21.3	79	5.3	516	0.0
Campania	4,644	-5.8	442	17.2	576	-0.5	5,695	-3.8
Puglia	7,077	-2.1	1,348	3.4	827	-0.8	9,267	-1.2
Basilicata	2,122	-0.7	130	12.1	112	4.7	2,364	0.2
Calabria	7,950	-7.6	1,794	11.1	359	2.6	10,109	-4.4
Sicily	8,147	2.5	1,710	2.5	974	2.5	10,860	2.5
Sardinia	1,787	11.8	174	8.1	130	4.0	2,091	10.8
Italy	59,035	0.6	12,534	5.8	9,618	0.4	81,731	1.3

¹ The sum of producers and processors does not correspond to the total operators, which also includes importers.

Source: based on SINAB data.

Organic area by region, 2020

	Organic UAA ¹			Percentage of total UAA ²
	ha	% var.	2020/19 farm average (ha)	
Piedmont	49,417	2.4	-2.7	19.5
Valle d'Aosta	1,409	0.1	-57.2	32.0
Lombardy	52,217	2.5	-7.7	26.3
Liguria	5,324	0.3	22.8	15.5
Trentino-Alto Adige	22,137	1.1	18.0	8.4
Veneto	45,999	2.2	-4.8	16.7
Friuli-Venezia Giulia	17,267	0.8	34.9	23.9
Emilia-Romagna	175,080	8.4	5.1	33.3
Tuscany	180,242	8.6	25.5	34.2
Umbria	47,369	2.3	1.7	29.2
Marche	111,929	5.3	7.0	29.4
Lazio	162,604	7.8	12.9	32.8
Abruzzo	50,696	2.4	18.8	27.3
Molise	12,141	0.6	1.5	27.9
Campania	64,719	3.1	-6.3	12.7
Puglia	269,497	12.9	1.2	32.0
Basilicata	104,792	5.0	1.5	46.5
Calabria	192,854	9.2	-7.4	19.8
Sicily	382,798	18.3	3.3	38.8
Sardinia	146,890	7.0	21.6	74.9
Italy	2,095,380	100.0	5.1	16.6

¹ Organic UAA and UAA under conversion.

² Total UAA from Indagine SPA 2016, ISTAT.

Source: based on SINAB and ISTAT data.

ber of pigs, sheep and goats continued to fall in 2020 compared to 2019, to which we can also add a reduction in the number of cattle. The reasons for this negative trend include the recognition of a production price for organic sheep and goat's milk that is insufficient to cover production costs and the high cost of organic feed, which make it difficult for organic livestock farms to remain in the certification and control system. In the case of cattle, there are also problems with marketing the meat, which is much less popular among large retailers than poultry. On the other hand, poultry numbers continued to grow (+1.8%), but at a much lower rate than in 2019 (+13.5%). The situation is the same for beehives but to a more moderate extent, with an increase of 4.9% compared to 10.5% recorded in 2019.

Organic areas by production type, 2020

Production type	UAA			incidence	Var. UAA 2020/19			
	under conversion	organic	total		org+under conv. / total	under conversion	organic	
						%	total	
	ha			%		%		
Total arable crops	152,647	800,724	953,371	16.0	45.5	-10.8	9.4	5.6
of which:								
Cereals	54,553	279,011	333,563	16.4	15.9	-12.2	4.0	1.0
Protein, legume and grain crops	6,007	41,051	47,058	12.8	2.2	-23.7	3.5	-1.0
Root crops	455	3,038	3,493	13.0	0.2	-48.6	7.8	-5.7
Industrial crops	5,544	38,303	43,847	12.6	2.1	-16.5	28.7	20.4
Fresh veget., strawberries, cultiv. mushrooms	10,129	58,940	69,069	14.7	3.3	-13.9	10.6	6.1
Fodder crops	68,428	358,439	426,867	16.0	20.4	-8.2	11.2	7.6
Other arable crops	7,531	21,942	29,473	25.6	1.4	3.2	35.8	25.6
Permanent meadows and pastures	99,243	484,538	583,781	17.0	27.9	-5.5	8.6	5.9
Total permanent crops	80,164	415,131	495,295	16.2	23.6	-12.8	6.9	3.1
of which:								
Fruit ¹	7,376	31,744	39,120	18.9	1.9	-24.1	16.1	5.5
Nuts	8,351	44,746	53,097	15.7	2.5	-22.8	12.4	4.9
Citrus fruits	4,500	31,017	35,517	12.7	1.7	-9.9	-2.5	-3.5
Olive trees	34,877	211,627	246,504	14.1	11.8	-11.6	4.1	1.6
Vines	24,062	93,316	117,378	20.5	5.6	-6.0	11.3	7.3
Other permanent crops	999	2,680	3,678	27.1	0.2	-28.8	10.3	-4.0
Fallow land	15,124	47,809	62,933	24.0	3.0	0.4	10.1	7.6
Total	347,178	1,748,202	2,095,380	16.6	100.0	-9.4	8.6	5.1

¹Fruit includes "temperate zone fruit", "subtropical zone fruit", "small fruits".

Source: based on SINAB data.

Extent of organic farming by species, 2020

	no. heads	% var. 2020/19	% of total livestock farming ¹	LSU ²
Cattle	316,417	-18.8	5.5	316,417
Sheep	486,989	-18.3	6.9	389,591
Pigs	50,451	-2.5	0.6	7,568
Goats	78,412	-21.1	8.0	11,762
Horses	15,421	50.2	9.4	4,626
Poultry	4,023,917	1.8	2.5	40,239
Bees (number of beehives)	191,044	4.9		

¹ Total livestock farming (number of heads) from SPA 2016, ISTAT.

² LSU are estimated on the basis of the number of heads per species, as detailed data is not available for the various different livestock categories.

Source: based on SINAB data.

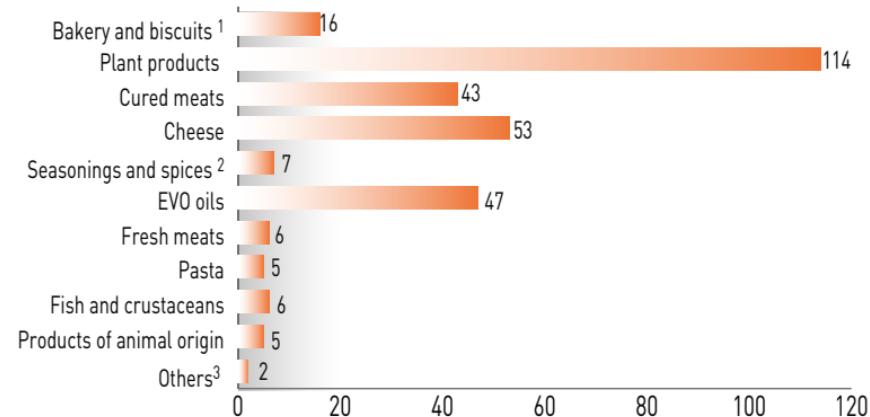
DESIGNATED PRODUCTS

Agri-food products

Italy continues to occupy the leading position for PDO-PGI agri-food products in the EU with 312 registered products and 3 traditional specialities guaranteed (TSG)¹. According to the latest ISTAT survey for 2019, the growth in the number of operators engaged in protected production has come to a halt (-1.6%), at 87,033 units, due to a slight fall in agricultural producers (-2.1%) and a more marked decline in processors (-5.7%). There are 82,000 producers, most of whom are engaged in the cheese (27,412), olive oil (22,356), fruit, vegetables and cereals (18,163) sectors. Meanwhile, there are 7,503 processors, who are mainly engaged in the oil (1,984), cheese (1,433), fruit, vegetables and cereals (1,372) sectors. Taking all operators into consideration, the biggest drop was recorded in the meat preparations sector (-28.3%). There was also a drop in fruit and vegetable operators (-2.9%), stagna-

tion in cheese operators, an increase in olive oil operators and especially in other sectors (+45.5%), a particularly dynamic sector characterised by a multitude of niche products, including balsamic vinegars, pasta and bakery products.

Italian PDOs and PGIs by goods categories (no.)



¹ Also includes Cioccolato di Modica.

² Balsamic vinegars, saffron and salt.

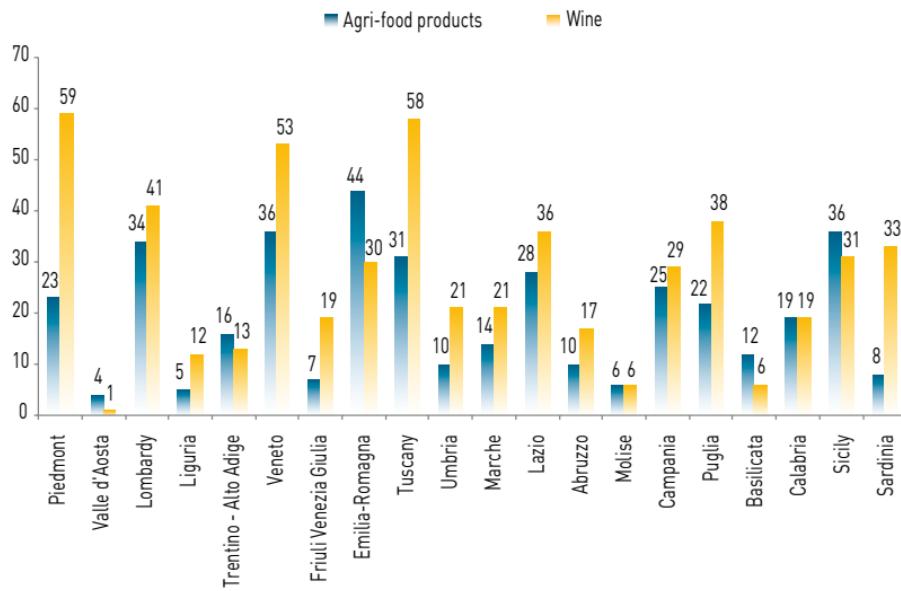
³ Liquirizia di Calabria and Olio essenziale di Bergamotto di Reggio Calabria.

Source: e-Ambrosia database. Update: 31 October 2021.

On a territorial level, there was a marked divide between the north and the south of the country: the positive trend among operators in the south continued (+4.8%), while they fell considerably in the north (-9%). The highest percentage of producers

¹ Mozzarella, Pizza Napoletana (Neapolitan Pizza), Amatriciana tradizionale (traditional Amatriciana).

Number of PDOs and PGIs by region



Update: 31 October 2021.
Source: Qualivita.

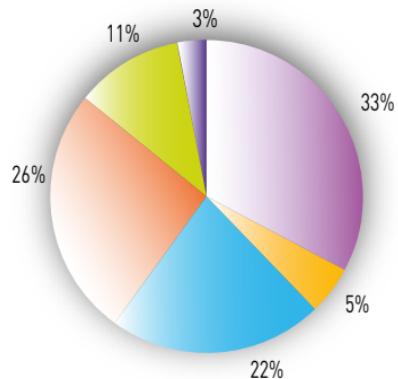
was recorded in the south (more than 41% of the total operators), while in the north there were more processors (40.7%); the distribution of operators in central Italy was more balanced, with an overall percentage of 22%, unchanged compared to the previous year, with producers accounting for 22.1% and processors for 25.2%.

The total number of farms was also down, at 42,188 (-6% approximately), to be found mainly in Sardinia (42.9% of farms), Lombardy (12.3%) and Emilia-Romagna (9%). On the other hand, the area rose to 253,311 hectares (+10%) due to increased investment in olive growing. Tuscany (27.8%), Puglia (20.6%) and Sicily (13.3%) are the regions with the highest percentage of area invested in PDO/PGI production compared to the national total. Pecorino Romano and Olio Toscano rank first in terms of herds and area.

The value of designated agri-food production, excluding wines, stands at €7.7 billion (Qualivita-Ismea data as at 2019). Cheese and charcuterie accounted for 84%

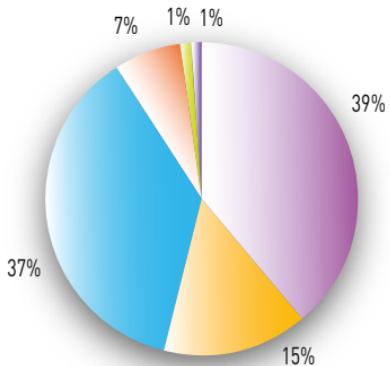
PDO and PGI numbers by the main categories, 2019

Operators (no.)*



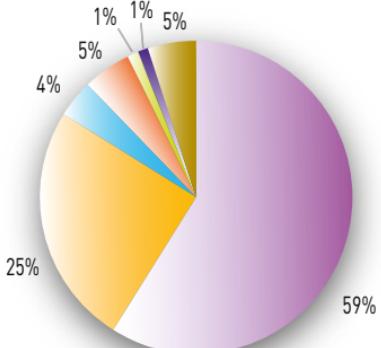
Cheese	28,454
Cured meats	4,123
Fruit, vegetables and cereals	18,900
Olive oils	23,226
Fresh meats	9,774
Other products ¹	2,556

Production (t)



Cheese	549,000
Cured meats	210,000
Fruit, vegetables and cereals	513,000
Balsamic vinegars ²	96,000
Olive oils	11,000
Fresh meats	14,000

Production value
(€ mln)



Cheese	4,515
Cured meats	1,927
Fruit, vegetables and cereals	318
Balsamic vinegars ²	389
Olive oils	82
Fresh meats	92
Other products	336

* ISTAT, PDO, PGI and TSG agri-food products, year 2019.

¹ Including balsamic vinegars.

² Balsamic vinegar production in litres.

Source: Qualivita-Ismea.

of the total value of PDO-PGI production, amounting to almost € 6.5 billion. At the opposite end of the spectrum from cheese and charcuterie, we find olive oil and the larger sector of fruit, vegetables and cereals: the former accounted for just over 1% of the value of production (-4.6% compared to 2018), the latter for 4.2%. Balsamic vinegars accounted for more than 5% of the total value of PDO-PGIs. Fresh meat accounted for 1.2% of the total PDO-PGI value, with Vitellone bianco dell'Appennino centrale and Agnello di Sardegna accounting for more than 80% of the value of the whole category.

Wines

There are 526 designated Italian wines, 408 of which are PDO and are divided, according to the traditional Italian terms, into 76 DOCG and 332 DOC; there are 118 PGI wines.

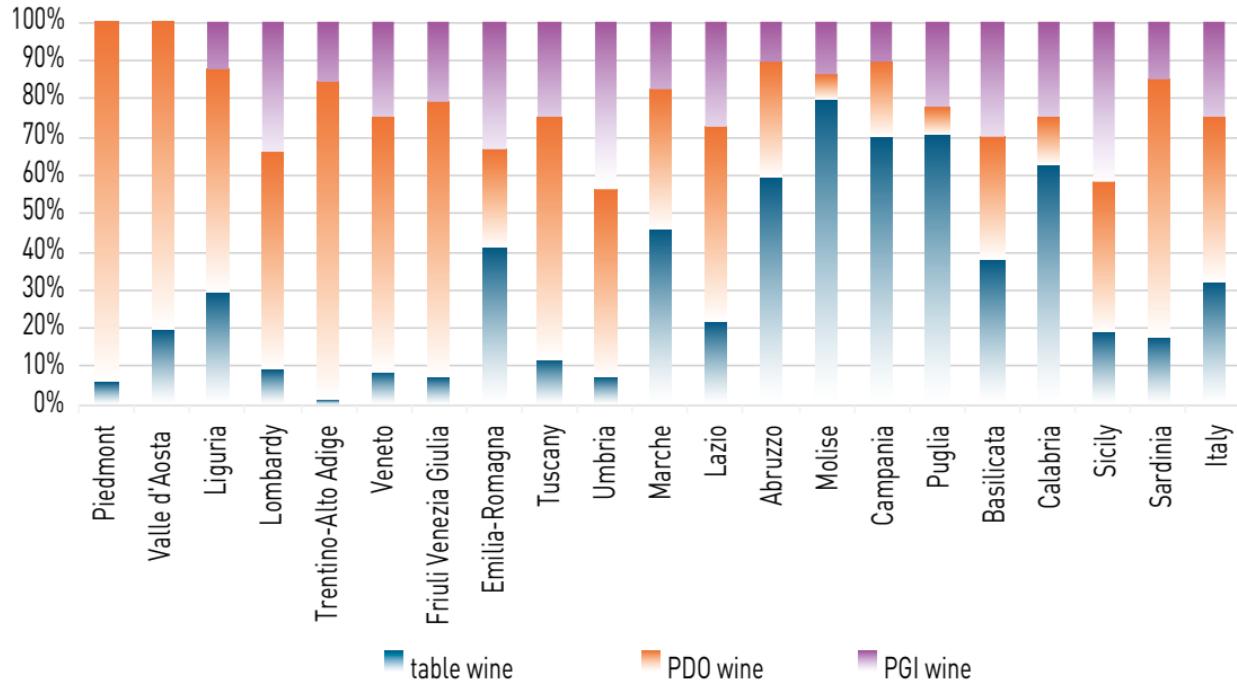
The production of PDO wine, amounting to

22.5 million hectolitres in the 2020 harvest, accounted for more than 43% of the total wine produced in Italy; with the share of PGI wine (amounting to 12.7 million hectolitres), certified production reaches almost 68% of total wine production. The 2020 harvest was up for all types of wine and in particular for PGI wine (+7.5%). The increase in the PDO component was more moderate (+2.1%), thanks in part to the effect of the government measure (Decree Law no. 34 of 19 May 2020) aimed at reducing the harvest of wines with designations of origin in order to reduce stocks in the cellar.

The wine market also felt the impact of the pandemic in 2020. Ho.Re.Ca. closures in the spring and in the latter part of the year deprived the quality wine sector of its most important market outlet. Sparkling wines, mostly consumed during celebrations and social events, suffered most. On the other hand, purchases in the large-

scale retail trade grew (7% in terms of value and 5.7% in terms of volume), as did sales in the e-commerce channel (+105%). Production price indices (ISMEA) show a more pronounced drop for PDO wines (almost -5%) and a more moderate one for PGI wines (-1.2%) in 2020. Export performance was also affected by the restrictions imposed by the pandemic, with a drop of 1.6% compared to 2019 for all PDO and PGI wines. However, this drop was more contained than that of exports for the wine sector as a whole (-2.4%), highlighting the greater resilience of PDO and PGI wines on foreign markets. Sales of PDO red wines and sparkling wines fell in particular, while sales of PDO white wines, PGI red wines and PGI sparkling wines increased. PDO and PGI wines are therefore once again amongst the best-selling Italian agri-food products abroad, with a total value of approx. €5.5 billion.

Percentage of PDO and PGI wine production out of the total by region, 2020



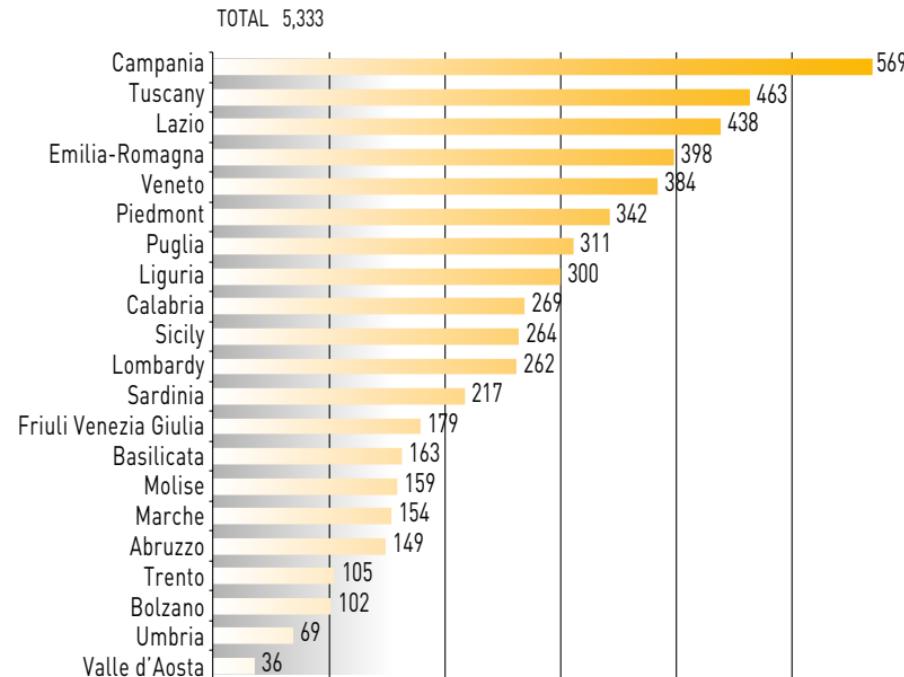
Source: ISTAT.

TRADITIONAL AGRI-FOOD PRODUCTS

Traditional agri-food products are niche products with a high gastronomic and cultural value that are not covered by the EU protection provided by designations of origin. The basic requirement concerns an established tradition in the method of processing, preservation and maturing, which must be consolidated over time (for a period of at least 25 years). These products received official recognition under Legislative Decree 173/98, which established a national list at the MIPAAF, updated annually by the Regions. Since 2008 they have been defined as an expression of Italian cultural heritage, on a par with historical, artistic and architectural assets.

The twenty-first revision of the list contains 5,333 traditional food specialities, 67 more than in 2020, with Campania, Tuscany and Lazio topping the list. Most of the traditional agri-food products fall into the categories "Fresh pasta, bakery and biscuits" (1,594 products), "Plant products" (1,462), and "Fresh and prepared meat" (813 products).

Traditional agri-food products by region (no.), 2021



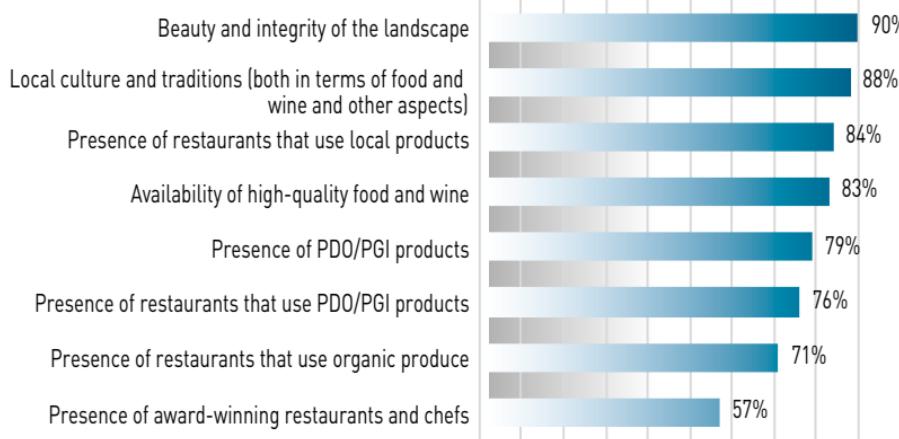
Source: twenty-first revision of the national list of traditional agri-food products, MIPAAF decree 3 March 2021.

FOOD AND WINE TOURISM

In 2020, the Covid-19 pandemic strongly affected tourism flows in Italy. According to ISTAT data, the overnight stays of foreign tourists decreased by 54.6% and those of residents by 32.2%, with a loss of more than €63 billion for domestic tourist consumption.

Gourmet tourists, on the other hand, held their own: those who travelled on the basis of this principal motivation increased by 10% in 2020, against the inevitable drop in the number of experiences enjoyed (-27%) (Italian Food and Wine Tourism Report). The phenomenon is growing: more than one Italian in two has made at least one trip with food and wine as the main reason over the last three years. The most common method is to stay (53% of tourists) at seaside resorts and then move inland to participate in food and wine experiences, including certain innovative solutions such as travelling to the farm by bicycle or participating in the grape harvest.

Travel decision variables for food and wine tourists



Source: Report on Italian food and wine tourism, 2021.

According to the Nomisma/Unicredit Tourism Observatory, Italian wine and food tourists spent €354 million in 2020. Alongside wine tourism, which attracts 5 million visitors a year and generates a

turnover of €2.65 billion, the combination of food and wine with other cultural and wellness experiences is becoming increasingly popular.

FOOD WASTE

In 2020, in Italy, more than 5.2 million tonnes of products were lost or wasted along the food supply chain (222,125 tonnes less than in 2019), worth €9.7 billion, net of costs related to water and soil consumption and the environmental impact of food production, processing and distribution.

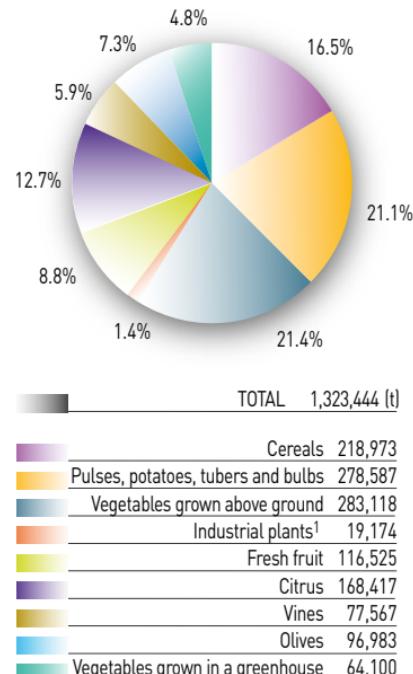
Closures due to Covid-19 prompted consumers to change their purchasing behaviour and habits, with generally more virtuous attitudes, such as storing and consuming over-purchased food or eating leftovers from previous meals. It has been calculated¹ that in 2020 Italians threw 27 kg of food per head in the bin, 3.6 kg less than in 2019, equivalent to 1,661,107 tonnes of food on a national basis, worth €376 million less than the previous year. This led to an 11.8% reduction in household waste, the value of which, at €6.403 billion, still represents one third of Food Losses and Waste (FLW) along the supply chain.

FLW on the field and in processing, distribu-

tion and catering amounted to almost €3.3 billion, a third of which can be attributed to the primary sector. In addition to the managerial, logistical, commercial, climatic and technical aspects that generate this phenomenon every year, in 2020 there was the added general uncertainty experienced by the market due to the pandemic; indeed, virus containment measures forced producers, where possible, to move to alternative market segments that were not always easy to identify immediately.

According to ISTAT, 1.3 million tonnes of products, or 2.4% of agricultural production, remained in the fields in 2020. These included 283,000 tonnes of vegetables grown above ground (21.4% of total agricultural residues), followed by pulses, potatoes, tubers and bulbs (21.1%), cereals (16.5%) and citrus fruits (12.7%). In addition to the market instability caused by the pandemic, adverse climatic events and plant diseases were also to blame.

Agricultural production left in the field by sector in Italy, 2020



¹ Data from Waste Watcher International/DISTAL University of Bologna for the Zero Waste campaign and Ipsos surveys.

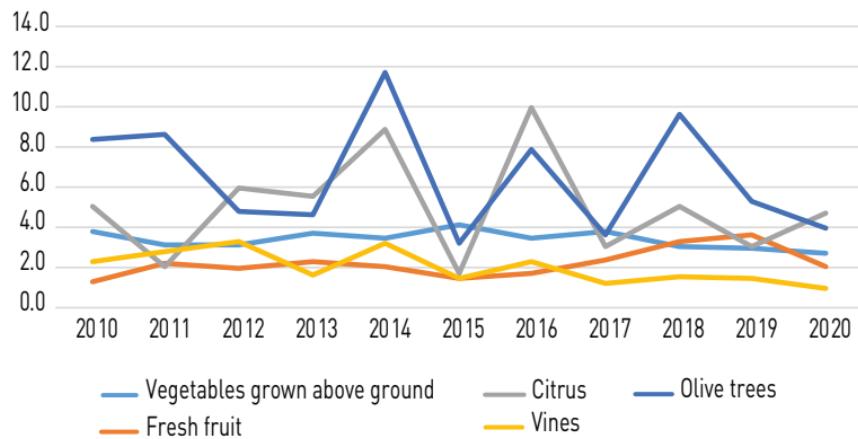
¹ tobacco, textile plants and oilseed plants.

Source: ISTAT.

In 2020, for the benefit of those in need, who increased as a result of drastic reductions in sources of income or the loss of jobs due to COVID-19, we observed a positive trend in the redistribution of surpluses recovered from large-scale distribution and catering thanks to the charitable donation of many brands: 100,983 tonnes of products (+33.8%) were distributed through 7,557 (+1.7%) charitable organisations and soup kitchens to almost 1.7 million needy people, approx. 200,000 more than the previous year (data from the Banco Alimentare Foundation).

In response to the increase in poverty, the Emergency Food Fund was implemented (€300 million, in addition to the €70 million from the European FEAD fund), €800 million was transferred to municipalities for shopping vouchers for families in difficulty, and a further €40 million was allocated in the Budget Law in order to arrange calls for tenders. The government intervened in the production sectors most at risk of surpluses, allocating €40 million and including

Trend in agricultural production left in the field by sector in Italy (%)



Source: ISTAT.

high-protein foods, processed fruit and vegetables, baby food, milk, olive oil and other quality products in the packages assigned to those in need.



ENVIRONMENT

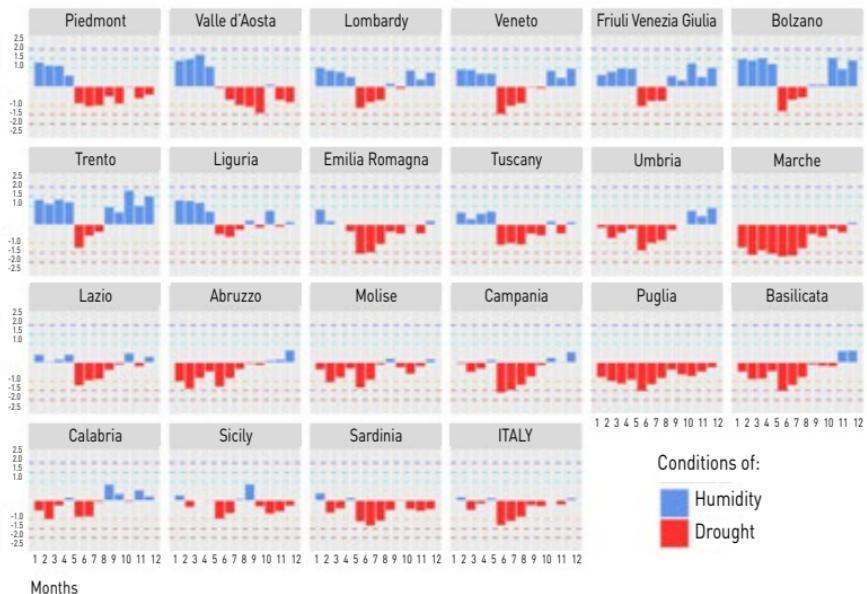
CLIMATE AND WATER SUPPLY

Like previous years, 2020 was warmer than the average for the 1981–2010 climate reference period, with positive differences of 0.95 and 1.29 °C for the minimum (ΔT_n) and maximum (ΔT_x) temperatures respectively. Much higher positive anomalies affected the whole country in February ($\Delta T_n = +2.5^\circ\text{C}$ and $\Delta T_x = +4.0^\circ\text{C}$) with a peak in Piedmont of $\Delta T_x = +5.1^\circ\text{C}$.

As in 2019, the annual rainfall on a national scale was in line with the climatic average, while its monthly distribution was very irregular, with lower-than-average precipitation in January (-71 mm), February (-55 mm) and November (-41 mm), and positive anomalies in June (+57 mm) and December (+56 mm), with particularly heavy precipitation in the north-eastern regions.

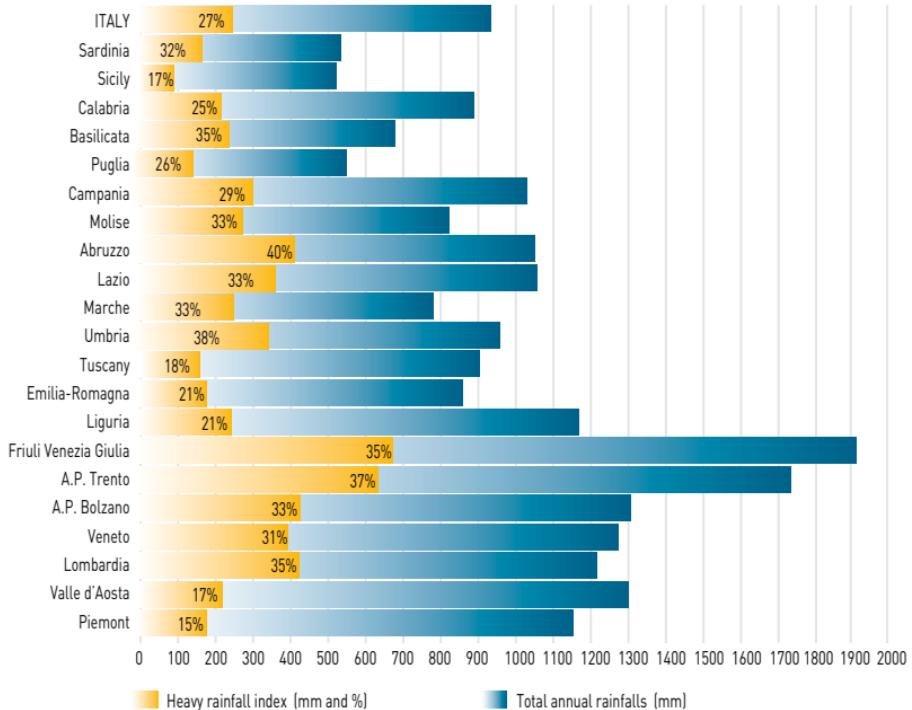
The heavy rainfall index ($R95p\text{TOT}$) confirms that, for 2020 too, 27% (approx. 250 mm) of the precipitation recorded in Italy was due to extreme events with dai-

Agricultural drought index SPEI-6months (Standardized Precipitation Evapotranspiration Index), 2020



Source: CREA-AA on the basis of ERA5 data [DOI: 10.24381/cds.adbb2d47] from Copernicus Climate Change Service (C3S).

Heavy rainfall index R95pTOT, 2020



Source: CREA-AA on the basis of ERA5 data [DOI: 10.24381/cds.adbb2d47] from Copernicus Climate Change Service (C3S).

ly precipitation above the 95th percentile of the reference climate distribution. Values equal to or exceeding 30% of heavy rainfall were reached in 11 regions.

The agricultural water supply, as measured by the SPEI (Standardized Precipitation Evapotranspiration Index) indicator calculated in 6-month steps, showed generalised critical conditions in Italy for the months of May and June (moderate drought, $-1.49 \leq \text{SPEI} \leq -1$). During the same months, severe drought situations ($\text{SPEI} \leq -1.5$) affected Emilia-Romagna, Marche, Puglia, Campania and Basilicata. A surplus water supply ($\text{SPEI} \geq 1$) was recorded mainly in the north during the first part of the year and in October. Again like previous years, 2020 was characterised by meteorological disasters, mainly related to waves of frost, gusty winds, whirlwinds and flooding or persistent rainfall, with the latter mainly affecting northern regions between 2 and 3 October. There were whirlwinds

and cloudbursts in Veneto in August, in November in the Crotone area, the Nuoro area, Ogliastra and Baronia, and in December in Puglia, where they struck olive groves ready for harvesting in the Brindisi area and swept away newly sown wheat and fodder in the Bari area. The late frosts that affected the plains of Emilia-Romagna in late March/early April were exceptional, causing serious damage to fruit production in particular, partly due to the advanced state of growth caused by the mild winter.

Extreme weather events (with recognised agricultural damage) - Year 2020*

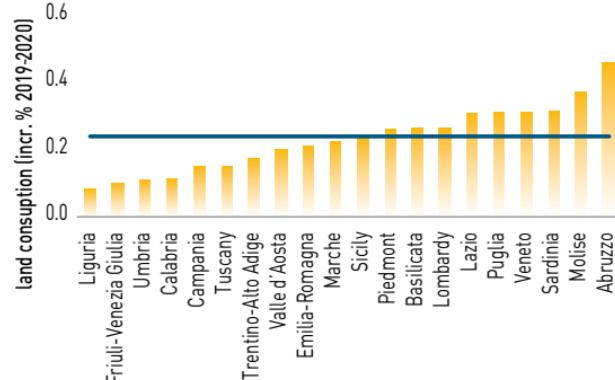
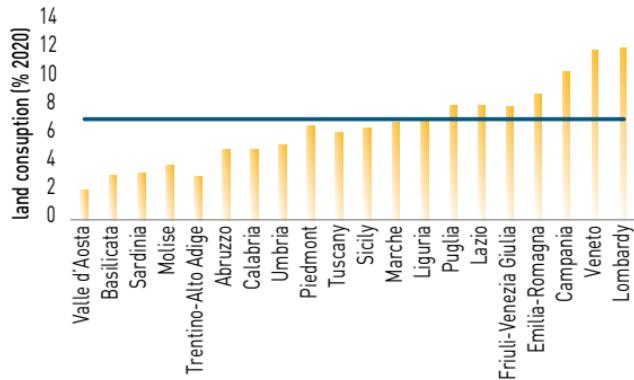
Region	Type of extreme events	Extreme events (no.)	Damage to production	Damage to farm buildings and infrastructures	Damage to agricultural structures
Calabria	Frosts	1	x	x	
Emilia-Romagna	Hail	1		x	
Emilia-Romagna	Frosts	1	x		
Lazio	Flooding or persistent rain	1			x
Liguria	Flooding or persistent rain	1		x	x
Lombardy	Whirlwinds	1		x	
Lombardy	Flooding or persistent rain	2		x	x
Marche	Flooding or persistent rain	1			x
Piedmont	Flooding or persistent rain	1		x	x
Puglia	Frosts	2	x		
Sardinia	Flooding or persistent rain	1		x	
Tuscany	Excessive snow	1	x		
Veneto	Strong winds	2		x	
Veneto	Excessive snow	1		x	
Italy		17			

* The data may be partial due to the availability of the relative decrees and data on the date the table was drawn up.

Source: CREA-AA calculations on the basis of MIPAAF data; available data as at 30 September 2021.

LAND CONSUMPTION

Percentage values of land consumed by region in 2020 (left) and increase compared to 2019 (right) compared to national average



Source: calculations based on ISPRA data.

In Europe, land consumption (LC) reached 539,000 hectares/year in the period 2012-2018 with a predominant impact on agricultural areas (78%) due to the expansion of industrial, commercial and residential areas (EEA, 2021).

In Italy, the ISPRA estimates an increase in LC of 5,670 hectares in 2020 com-

pared to 2019 (an average of 15 hectares per day). The percentage of artificial cover reached 7.11% of the national territory, representing an area of more than 2,140,000 hectares.

Although a slowdown has been observed in recent years, increases in artificial areas resumed in some regions in 2020. For

northern areas in particular, this phenomenon was linked to the economic recovery: eight regions exceeded the national average for the percentage of area consumed, with the highest ranked being Lombardy, Veneto and Campania. In terms of percentage increases compared to 2019, nine regions exceeded the national average, with

higher rates in Abruzzo, Molise, Sardinia and Veneto.

With regard to the main land uses, in the period 2012–2020, there was an expansion of artificial areas (+44,000 hectares,

+2.1%), which predominantly eroded planted and grassy areas. There was a particularly significant impact on agricultural areas and especially arable land (-35,000 ha), fodder crops (-9,000 ha), olive groves

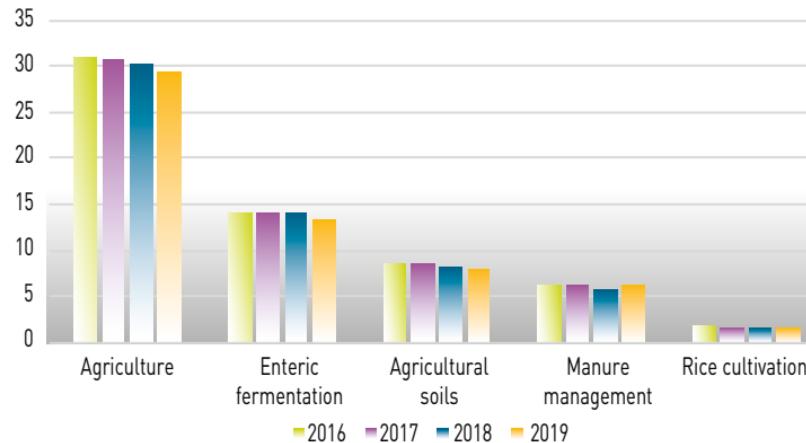
(-1,800 ha), orchards (-2,400 ha) and woodland (-3,700 ha). The reduction in agricultural land reached approximately 37,500 hectares, with the highest levels in Emilia-Romagna, Puglia and Sicily.

AGRICULTURAL AND FORESTRY SECTOR EMISSIONS

In 2019, the LULUCF (Land Use, Land Use Change and Forestry) sector removed 10% of greenhouse gases emitted into the atmosphere by the productive sectors (energy, industry, agriculture,

waste, transport and others), while the agricultural sector was responsible for 7% of annual emissions, mainly due to methane and nitrogen oxide emissions from livestock.

Agricultural sector emissions in Italy (MtCO_{2e})



Source: National Inventory of Greenhouse Gas Emissions.

Agriculture

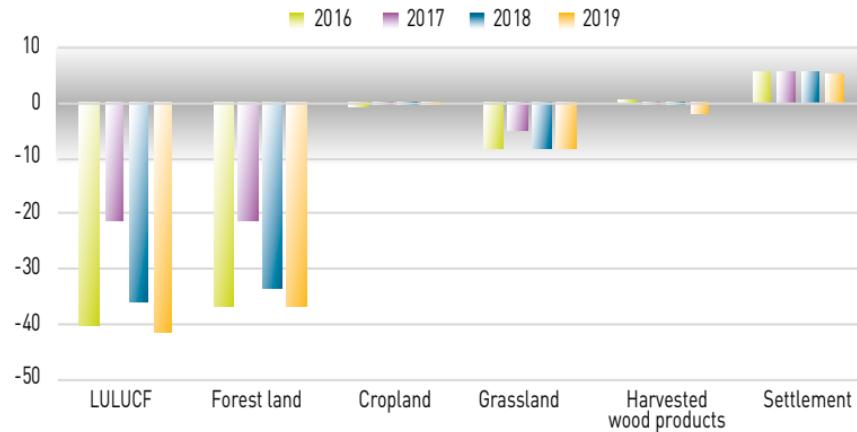
In 2019, the agricultural sector emitted 29.5 MtCO_{2e}, down slightly on 2018 (29.6 MtCO_{2e}). Methane remained the main component of agricultural emissions with 19 MtCO_{2e}, followed by nitrogen oxides with 10 MtCO_{2e}, while carbon dioxide contributes only 0.5 MtCO_{2e}.

Out of these polluting gases, 80% were released into the atmosphere due to livestock farming; 10% due to the use of synthetic fertilisers, 5% due to nitrogen inputs and the remaining 5% due to rice cultivation. Over the last 30 years, emissions have fallen by 13%, with the greatest acceleration recorded during the 20-year period 1990–2010, while over the last 10 years emissions have remained broadly stable at around 30 MtCO_{2e}.

LULUCF

The volume of greenhouse gas removals by the LULUCF sector increased by 15% in 2019 compared to 2018, recording the

LULUCF sector emissions/removals in Italy (MtCO₂e)



Source: National Inventory of Greenhouse Gas Emissions.

highest level in the last four years at 41.5 MtCO₂e. In greater detail, out of the six land uses into which the LULUCF sector is divided – forest land, cropland, grassland, wetlands, settlements and harvested wood products – only three act as carbon sinks. Forest land, grassland and harvested

wood products sequestered 36.8, 8.2 and 1.8 MtCO₂e respectively in 2019. Settlements emitted 5.2 MtCO₂e, which is very close to the average of the last four years, while cropland and wetlands have an emissions/removals balance that is very close to zero.

The volume of removals in the LULUCF sector in 2019 was higher than the average removals for the last 30 years, thanks to an increase in forest removals, which were positively affected by the limited area devastated by fires in 2019 (45,000 hectares); it is also worth emphasising the highest value ever recorded for carbon stored in harvested wood products, thanks in part to an increase in material available from the areas affected by Storm Adrian.

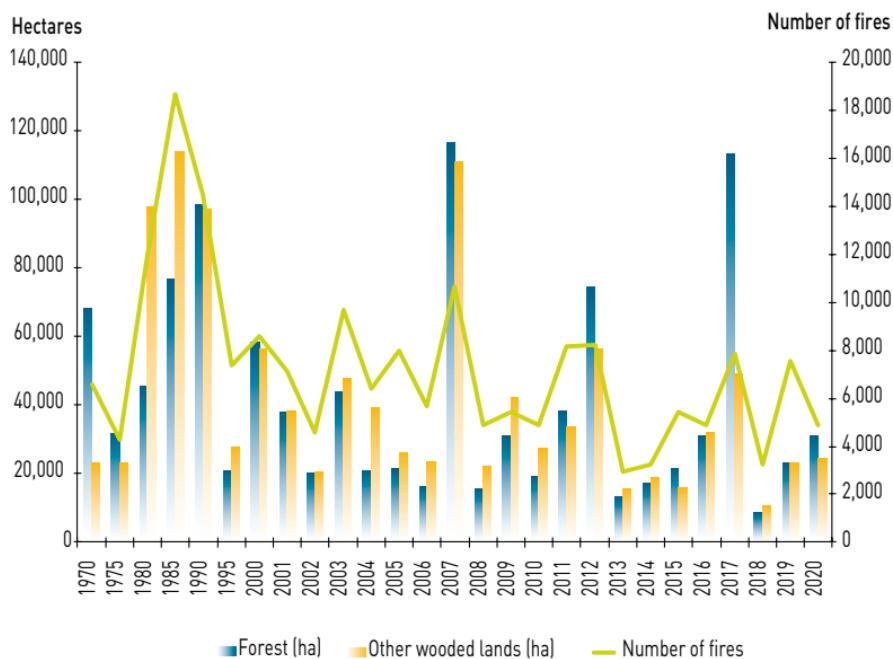
Fires

The national forest area affected by fires in 2020 increased by 21% compared to 2019, with 55,656 hectares going up in smoke. Fires impacted the woodland category more than the other wooded land category, affecting an area of 31,060 hectares and 24,596 hectares respectively. The area affected by fires remained below the average for the last 50 years, but this was not the case for the average area per fire, which rose to 11.44 hectares, the highest in 50 years.

The worst affected region was Sicily, where 23,447 hectares of forest went up in smoke (42% of the total burnt area nationally). Meanwhile, Sardinia recorded the highest number of fires, with approximately 1,000 fires affecting an area of 7,984 hectares.

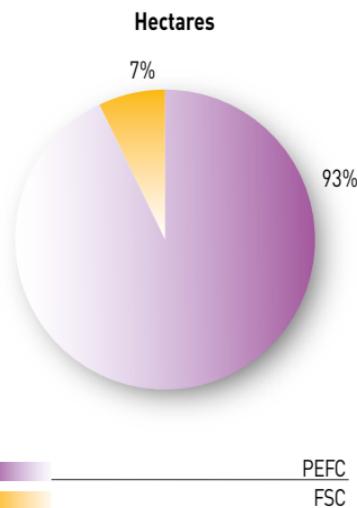
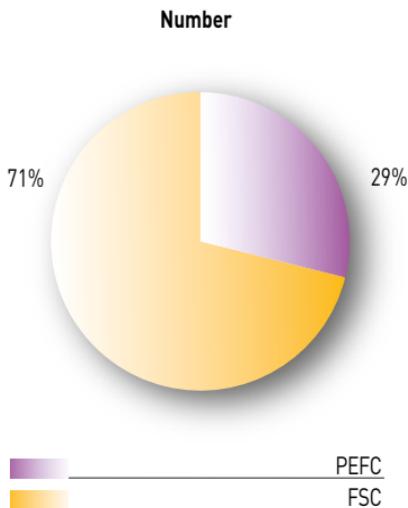
Unfortunately, a large proportion of fires – 17% of the total – affected protected areas, with 854 events.

Area affected by the fire and number of fires from 1970 to 2020



Source: calculations based on NIAB data.

CFS certifications in Italy



Source: PEFC and FSC data.

Forest certification

The two certification systems, FSC® (Forest Stewardship Council®) and PEFC (Programme for Endorsement of Forest Certification schemes), offer three types of guarantee: sustainable forest management, chain of custody certification (CoC, meaning that the timber and paper used to make goods and products come from sustainably managed sources), and certification of the ecosystem services provided by the forest.

The national area with sustainable forest management certification reached 957,559 hectares in 2020 (about 9% of the national forest area), up by 6% on 2019. CoC certification increased by 10%, from 3,654 certifications in 2019 to 4,010 in 2020.

On the other hand, the areas with certified ecosystem services were rather limited because this certification was introduced by the FSC in 2018 and by the PEFC in 2021. The PEFC-certified area was 1,292 hectares and the certified ecosystem ser-

vices were: stored carbon (removed or not emitted), biodiversity conservation and tourism-recreation. The FSC-certified area covered 54,792 hectares with the following services: biodiversity conserva-

tion, carbon sequestration, water conservation and purification, soil conservation and recreational services.

Forest certifications represent an added value for the woodland, increasing the

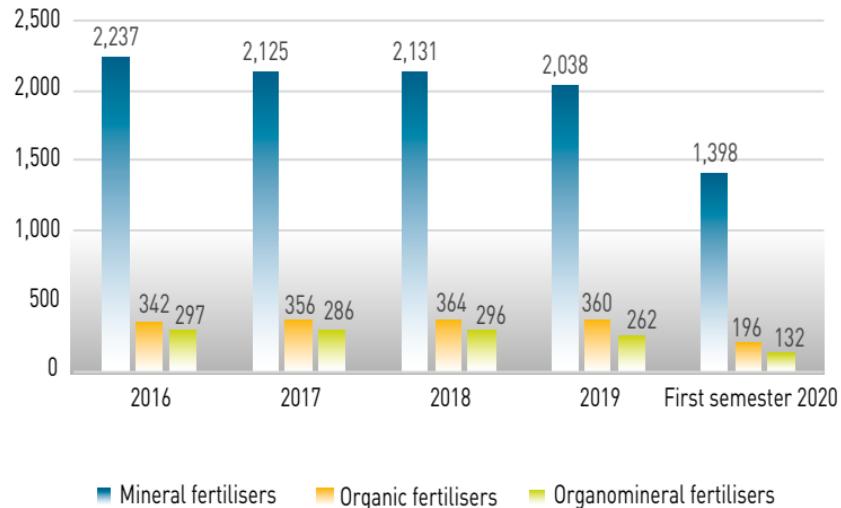
provision of ecosystem services as well as being a tool for addressing major environmental challenges such as climate change, deforestation and the illegal timber trade.

USE OF CHEMICAL PRODUCTS

The fertiliser consumption trend in Italy, for the period January-June 2020 (latest available data from Assofertilizzanti), shows a very slight variation in use of approximately -0.2%, falling from 1,730 thousand tonnes in 2019 to 1,727 thousand tonnes in 2020. In terms of individual components, mineral fertilisers (which account for 81% of the sector) increased by 0.6%, organic and organo-mineral fertilisers decreased by -0.9% and -7.5% respectively. Consumer sales of fertilisers consisted of 90% solid fertilisers, which actually dropped by 1%. Fluids also fell (-3.8%), while water-soluble fertilisers showed positive sales growth of 10.6%.

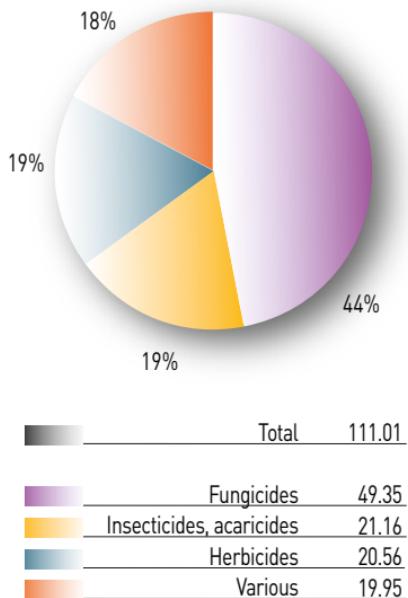
The geographical distribution across the national territory remains in line with the data from previous years: approximately 65% of the total amount of fertilisers was destined for northern regions, 18% for central regions and 20% for southern areas. Within the organic sector, specialist

Consumer sales of fertilisers in Italy (000 t)



Source: Assofertilizzanti.

Composition of plant protection products used (000 t), 2019



Source: ISTAT.

fertilisers recorded a higher growth rate than conventional products, confirming a development trend that began a few years ago: in 2020 they accounted for around 25% of fertilisers sold, compared to 20% in 2018.

The EFSA's annual report on pesticide residues in Europe for 2019 reveals that Italy is among the countries that carry out the most checks on pesticide residues in food, showing the best performance: it has a regularity rate of 97.6% of products analysed, better than the EU average (96.1%).

With regard to plant protection products, the volume of products and active ingredients distributed in Italy in 2019 (latest available data), is quantified by ISTAT at approximately 111,000 tonnes (- 3% compared to 2018), continuing the downward trend of recent years. The decrease was mainly due to fungicides (49,000 tonnes, -8.2%), which accounted for the largest share of the whole sector (44%). The

other components varied between 18% and 19% and all showed a positive variation. Insecticides and acaricides exceeded 21,000 tonnes (+2.5%), followed by herbicides with 20,600 tonnes (+1.5%) and other plant protection products with 19,900 tonnes (+0.9). The largest distribution of crop protection products was in the regions of northern Italy (55%), with Veneto and Emilia-Romagna consuming just over 18,000 tonnes per year respectively; 11% of plant protection products were used in the centre and 34% in the south.

In the first ten months of 2020, according to Agrofarma, the market for crop protection products grew by around 3% in value compared to the same period last year. From the point of view of macro-segments, herbicides increased by 8% at the end of October, mainly due to the weedkilling in rice fields, as a result of the use of new, more expensive formulations, and the increase in post-crisis herbicides for

maize. The spring weather trend, which generated suitable conditions for the development of fungal diseases and the consequent use of specific products, led to a growth in the fungicide segment of 3.8% in value compared to the previous year. Antiodicidides for fruit and vines particularly increased (+6.5% in value), as did the consumption of cupric. Insecticides, on the other hand, recorded a downward

trend (-2% in value) due to the withdrawal of registrations of chlorpyrifos and dimethoate products. One exception was organic insecticides (+12%), which are on the rise due to the strong expansion of this market. Other products, such as adjuvants, wetting agents and foliar fertilisers used in mixtures with plant protection treatments, showed an overall decrease of 1.5%.

The new EU Fertiliser Regulation no. 2019/1009 broadens the spectrum of fertilisers covered, allowing products such as organic fertilisers, organo-mineral fertilisers and biostimulants to bear the CE mark, and encourages the production of fertilisers in accordance with the circular economy model, made from secondary raw materials¹.

¹ Secondary raw materials (abbreviated as SRMs) consist of production waste or materials from recycling processes that can be fed back into the economic system as new raw materials.



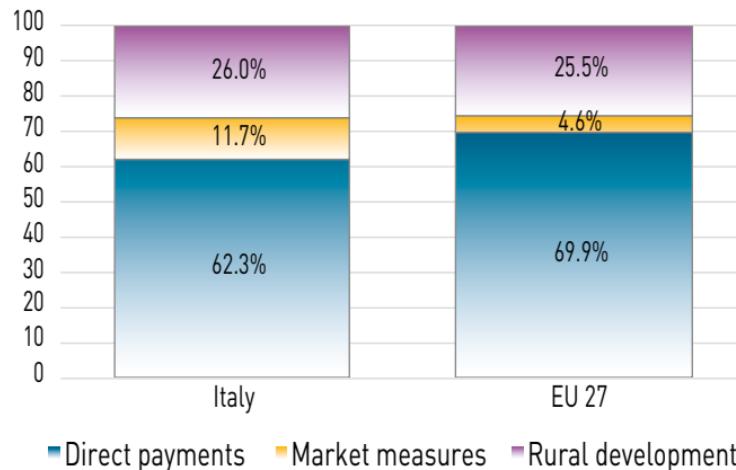
AGRICULTURAL POLICY

COMMON AGRICULTURAL POLICY – GENERAL FRAMEWORK

In 2020, the resources allocated to Italy for the implementation of the CAP amounted to a total of approximately €5.8 billion, with a share of the EU 27 total that remained stable compared to the previous year and amounted to 10.6%.

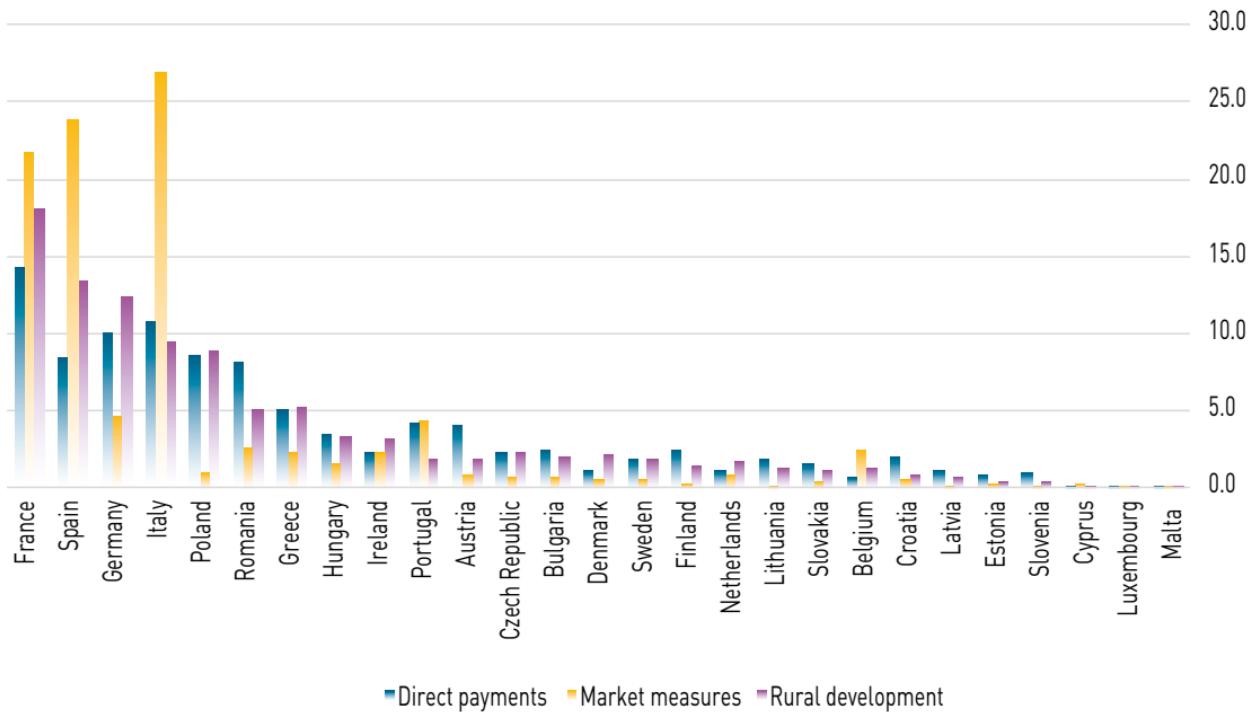
Looking at the distribution of allocated funding by expenditure item and member state, we can see that Italy is the main recipient of resources for market measures, followed by Spain and France. These three countries together account for just over 70% of this type of support, which focuses on fruit and vegetables and viticulture. Italy is the second largest recipient of EU funds for rural development (approx. 11%), after France (14%) and before Germany (10%), and the fourth largest recipient of resources for direct payments.

Distribution of CAP expenditure in Italy and the EU (2020; %)



Source: European Commission.

Distribution of CAP expenditure by EU member state and intervention type (2020; %)



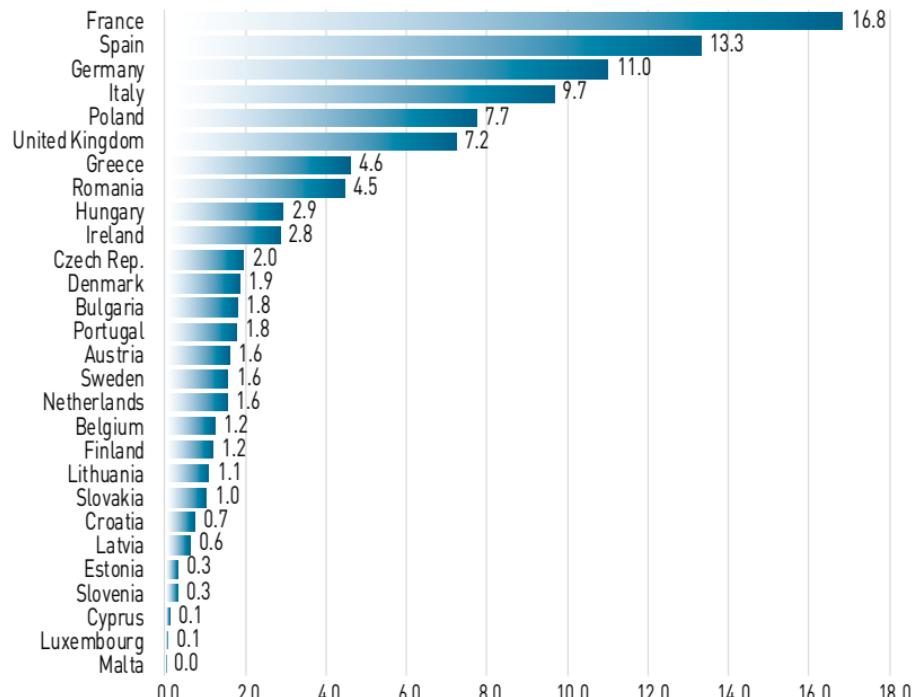
Source: European Commission.

CAP: PILLAR 1

France, with approx. €7.5 billion, is the biggest beneficiary of Pillar 1 expenditure (approx. 17% of the total), followed by Spain (€5.9 billion). Italy maintains its fourth place with a stable share of 9.7%, after Germany (11%) and before Poland (approx. 8%).

In 2020, CAP Pillar 1 resources for Italy amounted to €4,280 million (+0.2% compared to 2019), of which 84% is represented by direct payments. These accounted for just under 9% of what was spent on the same item at EU level. Market measures (approx. 16% compared to 6% for the EU) are of greater importance, under which Italy receives 30% of the funds for the two most supported sectors (fruit and vegetables and viticulture) and 2/3 of the funds for the olive-growing/olive oil sector. Compared to 2019, expenditure on market interventions increased by just over 7%, due to increased resources for fruit and vegetables and wine. For the latter sector, the injection of additional resources from the extraordinary

EAGF distribution by member state (2020; %)



Source: European Commission.

EAGF expenditure by intervention type, 2020

	Italy		EU		Italy/EU %
	€ mln	%	€ mln	%	
Interventions on agricultural markets	677.5	15.8	2,662.3	6.0	25.4
- Storage	0.1	0.0	2.1	0.0	5.9
- Olive-growing programmes	23.0	0.5	33.9	0.1	67.8
- Fruit and vegetables	274.8	6.4	902.3	2.0	30.5
- National support programmes for the wine sector	320.8	7.5	1,056.2	2.4	30.4
- Other	59.0	1.4	669.9	1.5	8.8
Direct support	3,599.1	84.1	41,396.3	93.4	8.7
- Decoupled direct support	3,062.7	71.6	35,403.8	79.9	8.7
- Voluntary coupled scheme	426.9	10.0	4,057.4	9.2	10.5
- Other direct support	109.5	2.6	1,935.2	4.4	5.7
Other measures	3.5	0.1	256.1	0.6	1.4
EAGF TOTAL.	4,280.1	100.0	44,314.8	100.0	9.7

* Including administrative costs.

Source: European Commission.

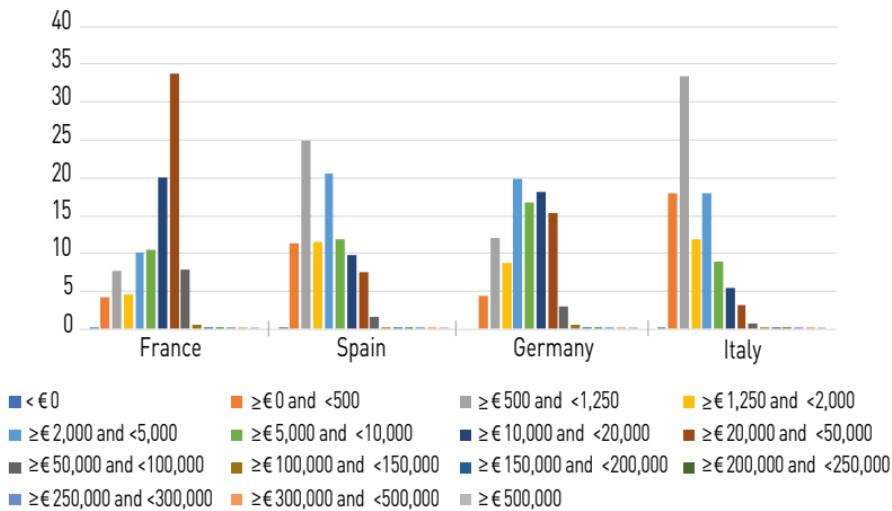
measures taken to contain the impact of the COVID-19 pandemic contributed to the increase in expenditure, used to finance crisis distillations and storage. The direct payment system financed the national

agricultural sector with €3.6 billion, of which just over half (approx. 55%) was accounted for by the basic payment to farmers who demonstrate that they are active and follow cross-compliance rules.

Just under 29% went to the same farmers for meeting green payment commitments. Voluntary coupled support, which benefits numerous sectors and products in Italy, such as beef and dairy cattle, sheep and goats, olive growing, tomato processing, sugar beet, and some cereal, oil and protein crops, accounted for approx. 12% of direct payments. Lastly, another 4%, totalling €150 million, was divided equally between the payment for young people setting up in the farming business for the first time and the simplified small farmers scheme.

In 2019, the usual distribution of direct payments by payment category was confirmed in Italy: just under half of the beneficiaries received less than €1,250 (amounting to 7% of total resources) and as many as 81% received less than €5,000 in direct payments (24% of the total). In contrast, only 0.3% of beneficiaries received payments of more than €100,000, accounting for approx. 13% of the resources. The comparison with

Distribution of direct payment beneficiaries by payment category in the top 4 EU countries (2019; %)



Source: European Commission.

the other main direct payment countries shows a relatively highly differentiated distribution. In Italy, the majority of beneficiaries were concentrated in the

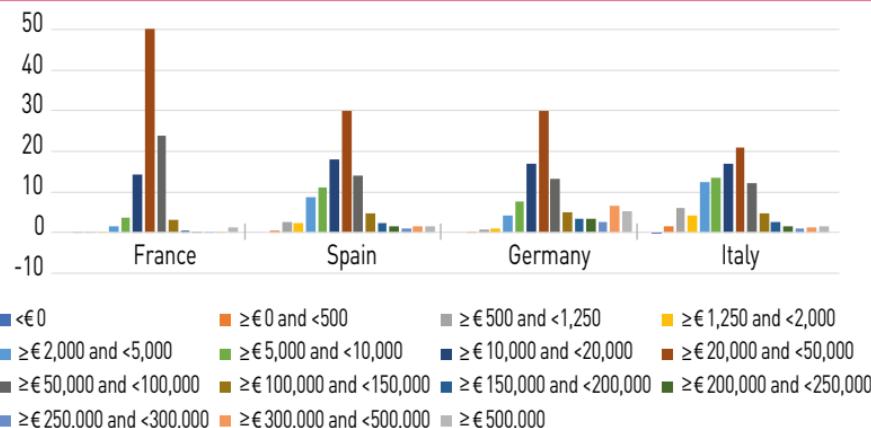
€500 to €1,250 payment category (33% of beneficiaries), as was also the case in Spain (25%), although payments between €2,000 and €5,000 also played a signifi-

cant part there (21%). In France, on the other hand, the most populated category was between €20,000 and €50,000 (34% of beneficiaries), while no predominant category emerged in Germany. However, in terms of the amounts received, the majority of direct payments in all four countries were concentrated in the €20,000 to €50,000 category. However, while in Italy this category represented "just" 21% of the total, in other countries it accounted for larger shares, ranging from 30% in Spain and Germany to 50% in France.

The average Italian payment was around €4,600 per farm, which was the lowest of the four countries analysed, and fell within a relatively wide range, with the average payment in the smallest category standing at €370 per farm on the one hand, and the average payment in the largest category standing at around €950,000 per farm on the other. In France, the divide was even bigger. In fact, the average payment exceeded

€21,000 per farm and ranged from just under €300 per farm to over €1.2 million. Obviously, these dynamics are also influenced by the different structural characteristics of agriculture in the countries taken into consideration. Out of the four, Italy has the smallest average farm size (11 hectares) compared to 24 hectares in Spain and over 60 hectares in France and Germany. Moreover, while in Italy farms with a UAA of less than 5 hectares account for 62% of the total, in France it is just under 1/4 and in Germany even less than 10%.

Distribution of direct payments by payment category in the top 4 EU countries (2019; % and values in euro)



Average payment in the top 4 EU countries and structural characteristics (2019; €/farm)

	France	Spain	Germany	Italy
Minimum payment (average for the ≥€0 to <€500 category)	297	383	386	370
Maximum payment (average for the ≥€500,000 category)	1,256,214	856,289	683,503	947,525
Average payment	21,326	7,697	15,419	4,581
Average farm size (hectares)*	60.9	24.6	60.5	11.0
Farms < 5 ha UAA (%)*	24.3	51.6	8.6	61.9

* Farm Structure Survey 2016

Source: calculations based on European Commission data

CAP: PILLAR 2

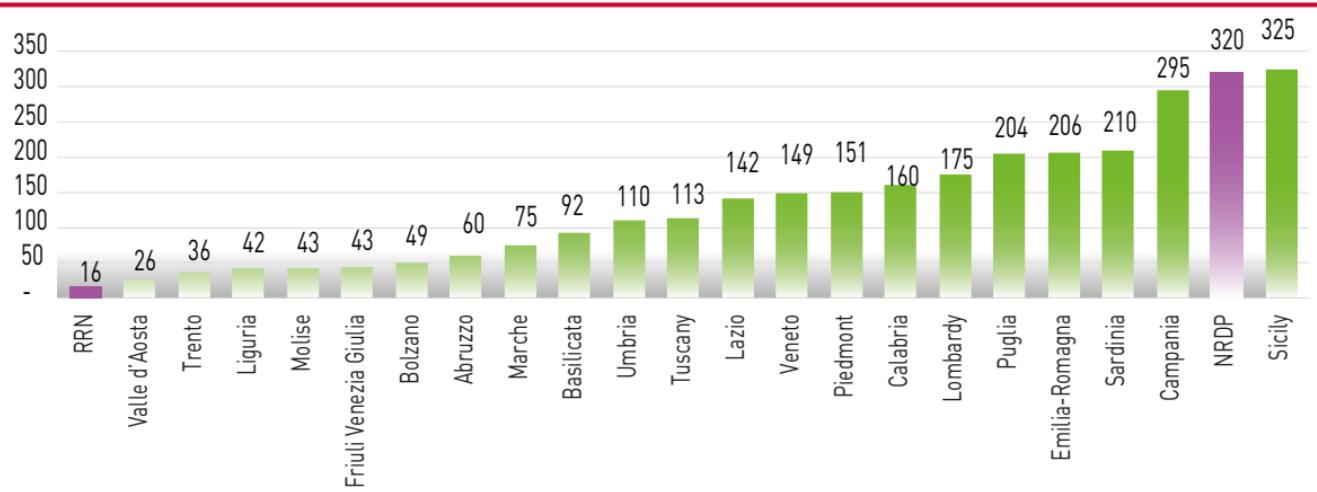
As of 31 December 2020, total public expenditure in Italy under Pillar 2 of the CAP amounted to €12.045 billion, of which €5.963 billion came from the EU budget. Despite the shock of the pandemic that affected all productive sectors, Italy maintained a good capacity for the

absorption of the available funds with a utilisation rate of 57.6% of the initial allocations, made possible thanks to the re-programming of resources and strategies implemented by the RDP management authorities.

The main contributors to this result were

the national Rural Development Programme (€1,296.1 million) and the RDPs of Sicily (€1,190.6 million), Campania (€1,007.1 million), Sardinia (€833.2 million), Veneto (€811.5 million) and Emilia-Romagna (€778.6 million), which together accounted for approximately half the

Distribution of public expenditure by programme (mln euro), 2020



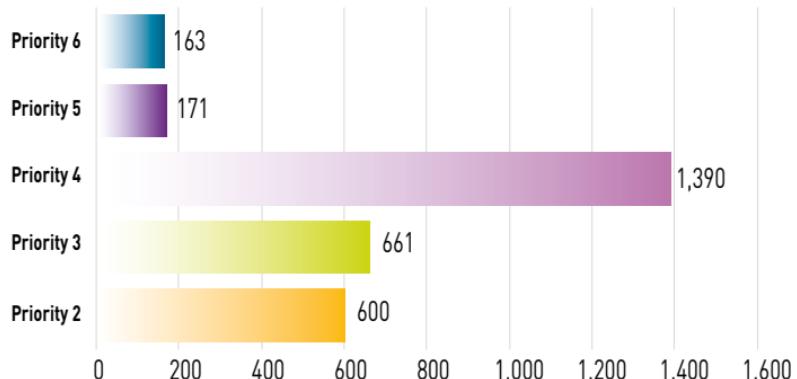
Source: based on MIPAAF data.

Allocations and expenditure 2020 (€ mln)

	Allocations 2014–2020	Expenditure 2020	Overall Expenditure	Financial progress (%)
	a	b	c	d = c/a
Piedmont	1,078.9	150.7	647.3	60.0%
Valle d'Aosta	136.9	25.7	91.9	67.1%
Lombardy	1,142.7	175.3	637.2	55.8%
Liguria	309.7	42.1	162.6	52.5%
Bolzano	361.7	49.1	282.2	78.0%
Trento	297.6	35.8	188.9	63.5%
Veneto	1,169.0	148.6	811.5	69.4%
Friuli Venezia Giulia	292.3	43.3	167.2	57.2%
Emilia-Romagna	1,174.3	204.3	778.6	66.3%
Tuscany	949.4	113.1	520.8	54.8%
Umbria	928.6	110.2	521.5	56.2%
Marche	697.2	74.8	290.7	41.7%
Lazio	822.3	142.0	468.4	57.0%
Total for more developed regions	9,360.6	1,316.9	5,568.9	59.5%
Abruzzo	479.5	60.4	225.6	47.1%
Molise	207.8	42.6	137.7	66.3%
Sardinia	1,291.5	209.8	833.2	64.5%
Total for regions in transition	1,978.7	312.8	1,196.6	60.5%
Basilicata	671.4	92.2	349.8	52.1%
Calabria	1,089.3	160.0	703.4	64.6%
Campania	1,812.5	295.3	1,007.1	55.6%
Puglia	1,616.7	204.3	669.6	41.4%
Sicily	2,184.2	324.7	1,190.6	54.5%
Total for less developed regions	7,374.1	1,076.5	3,920.4	53.2%
National rural development programme	2,084.7	320.0	1,296.1	62.2%
National rural network	114.7	15.9	62.7	54.7%
Overall total	20,912.9	3,042.0	12,044.6	57.6%

Source: based on MIPAAF data.

Distribution of public expenditure 2020 by strategic priority (€ mln)



Source: based on MIPAAF data.

total national financial progress.

During 2020, the Italian RDPs disbursed €3.042 billion in public contributions, thus reaching the spending target for this year. The only programme to have had its resources cut by the European Commission by approx. €95 million of the

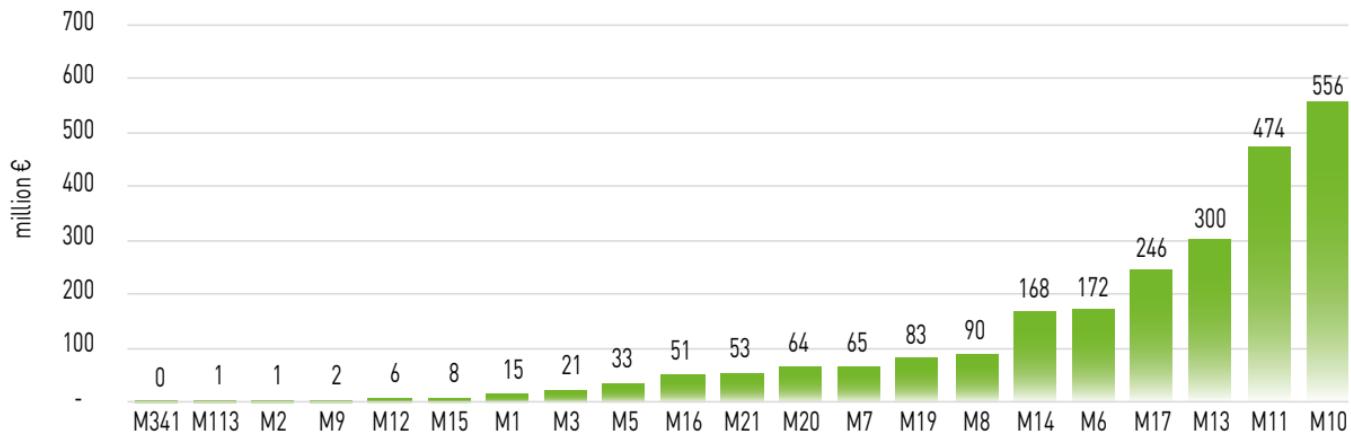
EAFRD share pertained to the region of Puglia. This was due to the application of the automatic decommitment mechanism, following a series of appeals and disputes that had dragged on since 2019.

The biggest part of the public support paid out, amounting to €1,390 million,

related to environmental and landscape interventions under Strategic Priority 4 “Preserving, restoring and enhancing ecosystems related to agriculture and forestry” (46.6%), followed by interventions under Priority 3 “Promoting food chain organisation, animal welfare and risk management” with €661 million (22.1%) and those under Priority 2 “Boosting farm profitability and agricultural competitiveness” with €600 million (20.1%). The operations financed under Priorities 5 and 6 were less significant, with payment volumes of €171 million and €163 million respectively.

As regards the individual intervention types, those that contributed most to the achievement of the 2020 expenditure target were: measure M4 “Investments in tangible fixed assets”, which accounted for approx. 21% of the total public contributions granted. This was followed by the so-called “premium” measures, which together accounted for 49.5% of

Distribution of expenditure by measure



Source: based on MIPAAF data.

total payments; in particular, M10 “Agri-environment-climate payments” (18.3%), M11 “Organic farming” (15.6%), M13 “Payments for areas with natural or specific constraints” (9.9%), M14 “Animal welfare” (5.5%) and M12 “Natura 2000

and Water framework directive payments” (0.2%).

It is worth highlighting the introduction in 2020 of the new measure 21 “Exceptional temporary support for the COVID-19 crisis” to ensure immediate

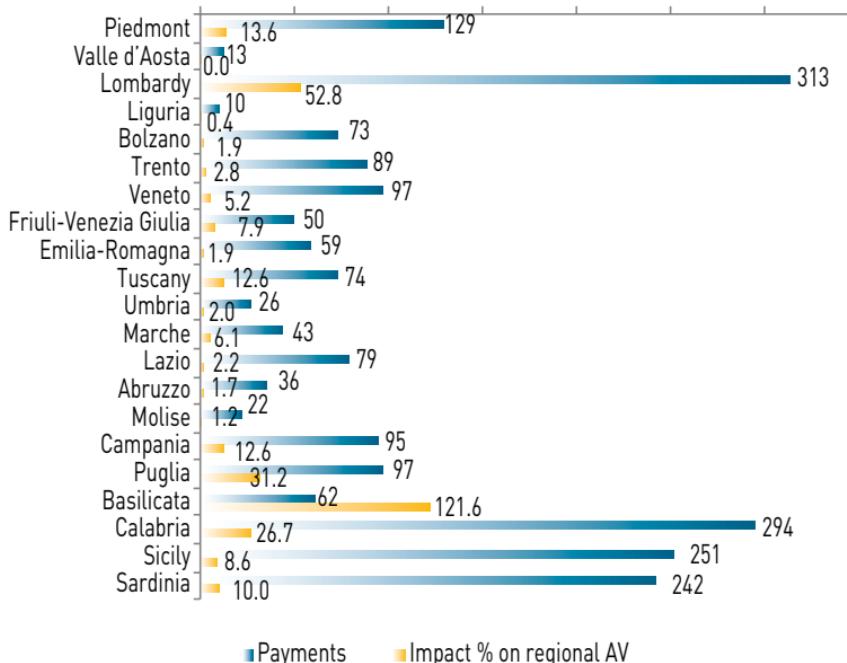
support for farming activities interrupted by measures implemented to contain the spread of the virus, for which expenditure of €53 million (1.8%) was recorded.

REGIONAL EXPENDITURE

An analysis of expenditure data from regional budgets identifies, for 2019, a total amount of payments for the agricultural sector that is slightly higher than in previous years, at just over €2 billion¹. The regions with the highest percentage impact of payments to the sector in terms of regional added value include Lombardy (52.8%), Puglia (31.2%), Calabria (26.7%) and Valle d'Aosta (13.6%).

The analysis of expenditure by type of agricultural policy interventions, according to the well-established classification adopted by CREA-PB, shows that the largest share of total payments is for technical assistance and research and forestry activities, with values of approximately €606 and €423 million respectively, slightly up on 2018 for technical assistance and down for forestry activities. Technical assistance and research account for 28.1%

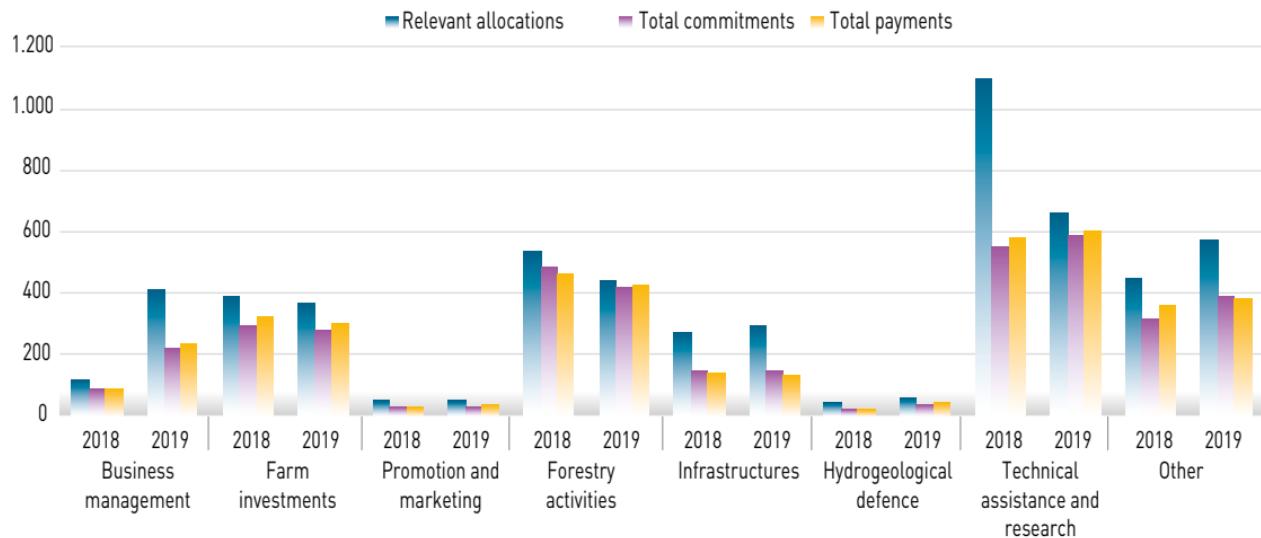
Payments to the agricultural sector (€ mln). Impact % on regional agricultural added value, 2019



¹ The data for Abruzzo, Basilicata, Friuli-Venezia Giulia, Trento, Veneto and Sardinia are estimates.

Source: CREA Research Centre for Agricultural Policies and Bioeconomy

Agricultural funding by economic-functional purpose (€ mln), 2019



Source: CREA Research Centre for Agricultural Policies and Bioeconomy.

.of total expenditure, followed by forestry activities (19.6%) and farm investments (14%), with different characteristics across regions.

The significance of payments for the agri-

cultural sector in reference to total payments in the budget of each region shows that agricultural expenditure is rather modest and, even in 2019, remained below the 5% threshold. The highest percentage

was observed in Calabria (4.5%), Basilicata (2.8%), Sardinia (2.6%) and the Autonomous Province of Trento (1.7%).

2021 Budget Law

The 2021 Budget Law for agriculture (Law 175/2020) confirms many of the interventions to support the sector targeted at ensuring the recovery of the agri-food sector in the post-pandemic period. The interventions can be separated into three types of action:

- a) Horizontal tax and contribution measures
- b) Development of the supply chain by setting up ad hoc funds and extending tax credits
- c) Payments with the increase of the National Solidarity Fund and the fund for the distribution of foodstuffs to those in need.

a) Horizontal tax and contribution measures - The main measures include the IRPEF exemption of the land and agrarian revenue related to plots declared by owner-farmers and professional producers who, with reference to the 2021 tax year, do not contribute

to the formation of the taxable base for the purposes of personal income tax; the extension to 2021 of the possibility to increase the VAT compensation percentages applicable to the supply of live cattle and pigs by no more than 7.7-8%; making ready-meals and prepared food products subject to VAT at 10%; the exemption from registration tax during 2021 for deeds of transfer of land and related agricultural land appurtenances with an economic value less than or equal to €5,000, for the benefit of owner-farmers and professional producers.

Contribution relief measures include the exemption of owner-farmers and professional producers (aged under 40) from paying 100% of their contribution credit to the general compulsory insurance for invalidity and old age. This exemption is valid for a period of 24 months, with reference to new registrations in the agricultural social

security scheme made between 1 January and 31 December 2021.

b) Supply chain development - Supply

chain development was promoted by means of:

- the fund for the development and support of the agricultural, fishing and aquaculture sectors, with a budget of €150 million for 2021 (subsequently increased by Decree-Law No 41/2021, the so-called Support Fund);
- the fund for the private storage of DOC, DOCG and IGT wines, with a budget of €10 million for 2021;
- the fund, with a budget of €10 million for 2021, for the revival of the beekeeping, brassica, hemp and nut sectors;
- the national pig-farming fund was refinanced with €10 million for 2021;
- initiatives were adopted to promote wine and food traditions, agri-food

products and the Mediterranean diet, and to combat Italian-sounding copies, with expenditure of €1 million per year for the three-year period 2021–2023;

- the extension of the 40% tax credit to agricultural and agri-food enterprise networks, set up as cooperatives or united in consortia, has been planned to boost e-commerce.

c) Payments:

- the budget of the National Solidarity Fund for farms damaged by adverse weather and plant disease was increased by €70 million for 2021;
- the Fund for the distribution of foodstuffs to those in need was refinanced by €40 million in 2021.

2021 Budget Law: Fishing and aquaculture

The main payment measures to benefit fishing were:

- allocation of €12 million for 2021 – from the Social Fund for Employment and Training – for financing the payments during the period of work suspension due to compulsory temporary cessation measures; allocation of €7 million for financing the payment for non-compulsory temporary cessation;
- allocation of €31.1 million for income support for people working in the fishing industry who suffered a suspension or reduction in their business, or a reduction in their income, due to the COVID-19 crisis, for a maximum of 90 days, during the period from 1 January to 30 June 2021.

Urgent measures linked to the COVID-19 crisis

Decree-Law No 73 of 25 May 2021, Support Fund bis, converted into Law No 106 of 23 July 2021, introduced easing measures and one-off payments for agriculture and fishing, as well as exemption from the

payment of social security contributions for some agri-food sectors. In greater detail, it made the following provisions:

- for female entrepreneurs to have access to easing measures for the development of agricultural businesses and generational handovers (granting of subsidised loans and a non-repayable contribution);
- the assimilation of the status of agritourism workers to that of agricultural workers;
- the possibility, throughout the duration of the crisis, for agricultural workers benefiting from social safety nets, to enter into fixed-term contracts with employers without reducing or losing the benefits they enjoyed and without altering their previous employment status;
- the granting of a one-off payment of €800 to fixed-term farm workers who worked at least 50 days in 2020 and a payment of €950 to self-employed fishermen, including members of cooperatives, who fish professionally;

- exemption from the payment of social security contributions, for the employer's share of the monthly payment for February 2021, for agritourism and viticulture businesses, as well as professional producers, owner-farmers, sharecroppers and planters.

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