ITALIAN AGRICULTURE IN FIGURES 2020

CREA - Research Centre for Agricultural Policies and Bioeconomy

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Consiglio per la ricerca in agricoltura
e l'analisi dell'economia agraria

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ITALIAN AGRICULTURE IN FIGURES 2020

ROME, 2021

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Now in its XXXIII edition, "L'agricoltura italiana conta" (Italian agriculture in figures), edited by the CREA Centre for Agricultural Policies and Bioeconomy, has the task of providing an overview of the relationships between the various components that define the role of the primary sector in an advanced economy, making use of the specialist knowledge of a large group of researchers.

The statistical data analysed in this edition mainly refer to 2019 but, where possible, have been supplemented with estimates and trends for 2020 to which the Covid-19 pandemic has imparted a momentous shock and whose outcomes are yet to be defined in their severity. The Italian agri-food system, although severely affected by the measures put in place to control the course of the epidemic, nevertheless ensured food supply and safety for the entire population, thanks to the efforts of operators and the intervention of institutions. Indeed, the emergency has highlighted the essential and strategic function of the agricultural sector, highlighting the tenacious resilience of the system and bringing back to the centre of the debate an all-encompassing reflection to mitigate its fragilities and weaknesses.

The 2019 data shows a healthy national agricultural sector overall, bucking the recessionary economic environment. The value of production of agriculture, forestry and fisheries as a whole, amounting to 61.6 billion euro at the end of the year, increased slightly thanks to the good trend in the prices of products sold (+1.1%), although there was a modest drop in volume (-0.7%), due to the effect of the vegetable, wood and fodder component, whose production results were strongly influenced by unstable weather conditions that favoured the spread of certain parasitic agents. The climate change underway, with above-average temperatures and extreme and intense weather events, is of increasing concern to all those involved and makes our agricultural system particularly vulnerable.

The food industry showed one of the most dynamic trends in the overall economy, reporting a 2.7% increase in added value, for an absolute value of 30,035 million euro. This allowed the agri-food sector as a whole (agriculture plus food industry) to increase its added value by 1%, raising its contribution to the national economy to 4.1%.

Employment in agriculture increased slightly (+0.2%), but the amount of work in terms of standard units decreased, due to a lower contribution from the self-employed component (-0.3%), which continues its slow downsizing. Estimates for the first half of 2020 highlight how the actions established by the government in order to contain the spread of Covid-19 had a more mitigated effect on the sector. The reduction in agricultural employment stood at 2.4%, compared to -3.6% for the economy as a whole.

The good performance of agri-food exports continued in 2019, with 43.8 billion euro

(+4.4%), and improved the agri-food balance deficit, which fell below one billion euro for the first time (-708 million). The Made in Italy component represents 73.6% of our country's agricultural and food exports.

On the environmental sustainability front, the latest data show how the agricultural sector is increasingly contributing to the achievement of greenhouse gas emission reduction targets, not only directly, by reducing harmful emissions, but also through the absorption of atmospheric CO2 emissions. This is achieved not only because of the contribution of forests but also because of changes in land use and the increased use of more sustainable farming practices such as organic and conservation agriculture.

The dynamics of the non-strictly agricultural component of the farm's activities, which is defined as "diversification", is once again lively. The combined value of support production and secondary activities has now consolidated its 20% incidence on total agricultural production. Faced with risks from external pressures and changes in the socio-economic environment, farms are increasingly strengthening services and activities that are not strictly agricultural, such as product processing and agri-tourism.

The booklet presented here is the result of a complex work of gathering and arranging data related to the agri-food sector, which takes place thanks to the efforts of CREA researchers, mostly belonging to the Centre for Agricultural Policies and Bioeconomy. My thanks, and those of the Centre, go to all of them, and in particular to the working group coordinator, Ms Francesca Marras.

Director of CREA
Research Centre for Agricultural Policies and Bioeconomy
Roberto Henke

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BACKGROUND DATA

AREA AND POPULATION

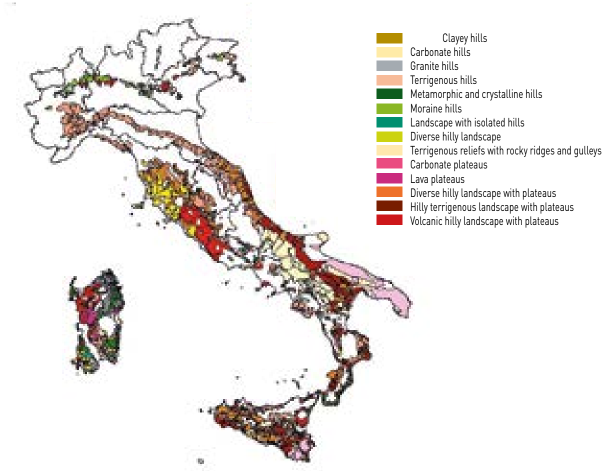
The total surface area of Italy is 302,073 km2, with a maximum latitude extension of 1,180 kilometres and a maximum longitude extension of 530 kilometres. The considerable extension in latitude makes the climatic characteristics of the Italian territory very varied, favouring the development of very diversified cultivation systems that generate highly specialised agri-food products.

From the orographic point of view, the country features a predominantly hilly

Plain landscapes

Source: ISPRA 2013. Nature Map Information System data at scale 1:250,000.

Hilly landscapes

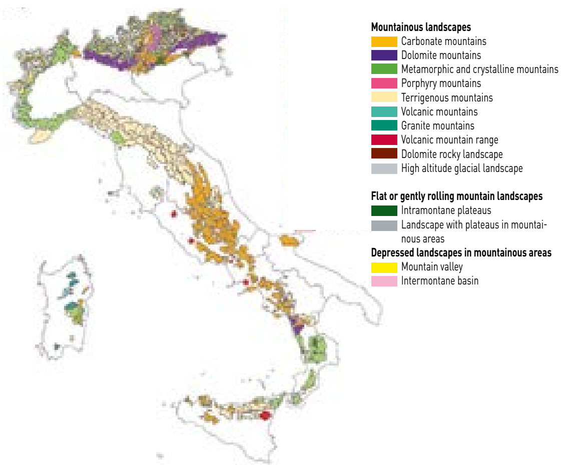


Source: ISPRA 2013. Nature Map Information System data at scale 1:250,000.

landscape (41.6% of the total surface area, where 38.8% of the population resides), followed by the mountainous surface area (35.2%, in which 12.2% of the population resides) and plains (23.2%, in which 48.9% of the population resides). This orographic layout defines several types of landscape on the Italian territory: ISPRA identifies 37 different types, divided into plain, hilly and mountainous types.

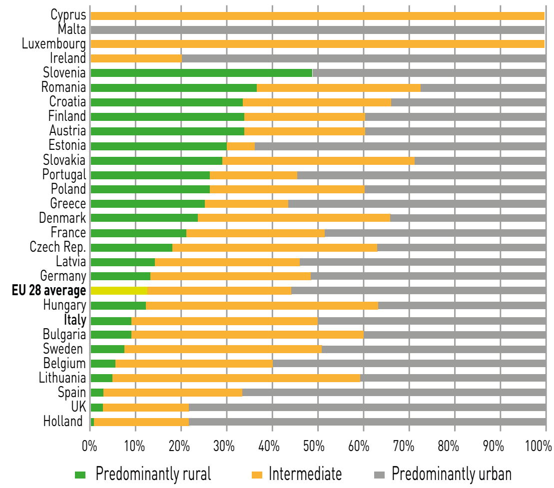
Based on the Eurostat classification, in

Mountainous landscapes



Source: ISPRA 2013. Nature Map Information System data at scale 1:250,000.

EU 28 added value by type of area (%)



Source: Eurostat.

Italy 25.5% (77.048 km2) of the territory falls in predominantly rural areas, 53.9% (162.876 km2) is made up of intermediate areas, and the remaining 20.6% (62.149 km2) of predominantly urban areas.
In Italy, economic activity, measured in terms of AV share, in predominantly rural areas (9.1%) is lower than the European average (12.3%), with marked differences between Member States. In the Netherlands, the UK, Lithuania, Belgium and Sweden, only 8% of economic activity is generated in rural areas, while in Estonia, Austria, Finland, Croatia, Romania, Slovenia, Slovakia and Denmark this figure is over 30%.
Italy's resident population continues its downward trend, which has been declining for five consecutive years, and records a reduction of -1.9 per thousand residents in 2019. This decrease is due to the negative balance of the natural trend (births/deaths) in 2019, which amounted to -212 thousand units, only partially mitigated by a positive balance of migration from foreign countries (+143,000).
The decline in population is concentrated mainly in the South (-6.3 per thousand) and to a lesser extent in the Centre (-2.2 per thousand). On the contrary, the population growth process continues in the North (+1.4 per thousand).
As of 1 January 2020, resident foreigners totalled 5.38 million (8.9% of the total), up 123 thousand units (+2.3%) from a year earlier. The regions with the highest rate of foreign population on the total number of residents are Emilia-Romagna (12.6%), Lombardy (12.1%) and Lazio (11.7%). The percentage share of the foreign population is relatively lower in the South (4.4% compared to 11% in the Centre-North).

2019 presents an economic slowdown that will be greatly intensified by the health crisis related to the Covid-19 pandemic and subsequent containment actions that have been put in place in 2020. Forecasts estimate a dramatic drop of Italy's gross domestic product in 2020, with a loss of between -9 and -13 % (IMF). The country can only expect a mild recovery in 2021, so the negative impact of Covid-19 will have a long-term effect. It comes after a period of stagnation that had been going on for two years. Indeed, in 2019, GDP is reported to have grown by only 0.3% in volume, down from 2018. In real terms, GDP increased by 1.1% (market prices), with a value of 1,789,747 million euro at current prices, while per capita GDP was approximately 29,710 euro (current values).

The trends in the main aggregates of internal demand in 2019 see gross fixed capital formation as the most dynamic component of demand, up 2.3% from 2018. Exports of goods and services increased in value by 1.5%, while the value of imports decreased by 0.8%. The trend in internal demand shows growth in household end consumption (+0.9%, it was +0.6% in 2018), positive but lower than in previous years (it was +2% in 2015).

Household disposable income marks a growth of just 1% in value and 0.5% in real purchasing power terms. The propensity to save, on the other hand, remains stable at around 8%.

The country closes 2019 with a debt-to-GDP ratio of 134.8%, compared to the projected 132.6%. The framework for the fourth quarter of 2019 projects Italy in full

GDP trend in Italy

Current prices	2016	2017	2018	2019
GDP (million euro)	1,695,787	1,736,593	1,771,063	1,789,747
GDP per capita	27,988	27,971	28,687	29,231
% change over the previous year	**2016**	**2017**	**2018**	**2019**
Gross fixed capital formation	3.9	4.3	4.0	2.3
Exports (goods and services)	1.1	7.3	4.1	1.5
Imports (goods and services)	-0.1	9.6	6.0	-0.8
Net exports of goods and services (million euro)	55,761	49,724	42,336	54,613

Source: ISTAT.

recession. 2019 closes with a sharp slowdown in growth, particularly in industrial production, an essential absence of public and private investment (excluding the Morandi bridge), and a continuing lack of confidence among foreign investors.
Changes in GDP in the main industrialized countries, according to International Monetary Fund (IMF) estimates, show decreasing values compared to 2018 in all the countries analysed, especially in Mexico, as well as in Italy, but also in Turkey, Germany and Japan. The largest share of world GDP is still China's. The EU countries as a whole recorded a 1.6% change compared to 2018.

GDP trends in some countries (% change in current values at market prices)

	2016	2017	2018	2019
China	6.7	6.9	6.6	6.1
United States	1.5	2.3	2.9	2.3
Euro Area Countries	**1.8**	**2.1**	**1.9**	**1.3**
India	7.1	6.7	7.4	4.2
Japan	0.9	1.7	1.2	0.7
Germany	1.9	2.5	2.5	0.6
Russia	-0.2	1.5	1.7	1.3
Brazil	-3.5	1.0	2.3	1.1
UK	1.9	1.8	1.6	1.4
France	1.2	1.8	2.1	1.3
Mexico	2.9	2.0	2.3	-0.1
Italy	0.9	1.5	1.5	0.3
Turkey	3.2	7.0	4.4	0.9
Korea	2.8	3.1	3.0	2.0
Spain	3.3	3.1	2.8	2.0
Canada	1.4	3.0	2.1	1.6

Source: International Monetary Fund

ADDED VALUE

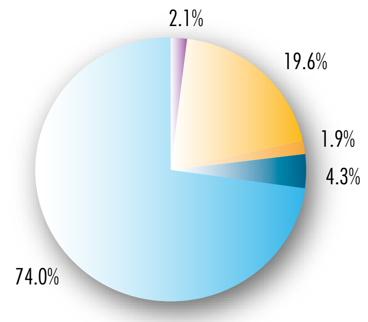
In 2019, the total added value increased overall by 1.3% compared to 2018 (at current values). The most dynamic sectors include construction (+2.8%) and, as a part of industry in its narrow sense, the food, beverage and tobacco industry (+2.7%), for a value of 30,035 million euro.

After a positive performance in 2018 (+1.6% in volume), the agriculture, forestry and fisheries sector recorded a drop in production by volume of 0.7% and in added value by 1.7%, settling at 34,579 million euro at current prices.

The agri-food sector as a whole (agriculture, forestry and fisheries and the food industry) posted an increase in added value of 1% at current prices and 0.1% in volume, bringing its contribution to the national economy to 4.1%, up from 3.9% in 2018. The primary sector contributed to this result with 2.2% (it was 2.1% in 2018) and the food industry with 1.9% (1.8% in 2018).

In 2019, Italy ranked first in the European ranking for agricultural added value, once again surpassing France (31.3 billion). Of an estimated EU total of 188.7 billion euro, Italy contributed 16.8%, France 16.6%, Spain 14.1% and Germany 11.2%.

Breakdown of added value at basic prices by sector, 2019 - Values at current prices



(million euro)

TOTAL	1,603,736
Agriculture, forestry and fisheries	34,247
Industry in its narrow sense	314,287
Food, beverage and tobacco industries	30,588
Construction	68,392
Services, including public administration	1,186,810

Source: ISTAT.

% share of agricultural added value* on total AV of individual EU countries, 2019

Countries	%
Austria	1.2
Belgium	0.5
Bulgaria	3.7
Cyprus	2.0
Croatia	3.4
Denmark	1.5
Estonia	2.9
Finland	2.7
France	1.8
Germany	0.8
Greece	4.2
Ireland	1.0
Italy	2.1
Latvia	4.3
Lithuania	3.6

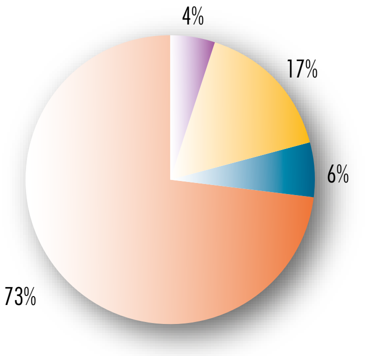
Countries	%
Luxembourg	0.2
Malta	0.8
Netherlands	1.8
Poland	2.7
Portugal	2.4
UK	0.7
Czech Republic	2.1
Romania	4.5
Slovakia	2.8
Slovenia	2.3
Spain	2.9
Sweden	1.6
Hungary	4.0
EU 28	**1.6**

*Calculated on the added value at current prices - million euro
Source: Eurostat.

EMPLOYMENT

2019 was still a positive year for employment in the Italian economy, where all aggregates recorded a small percentage growth. Total employment (+0.5%), labour units (+0.2%) and total hours worked (+0.3%) increased. In spite of this, the gap with the European Union remains high, indeed it is widening because the recovery in Italy has been much more modest.
Although in terms of employment the levels are now higher than before the 2008 crisis, overall labour input in hours worked still remains well below, suggesting that low labour-intensity employment growth is now a structural trend.
Indeed, the share of fixed-term and part-time employment increased. Alongside the characteristics of employed work, the socio-demographic composition of the employed has also changed: although only slightly, the share of women has increased (42% in 2019, it was 40% in 2008), while, partly as a consequence of demographic ageing, the share of the under-34 age group has decreased significantly (from 30% in 2008 to 22% in 2019).
The share of foreign workers continues to grow (10.7%) despite the fact that in recent years the country has been less attractive and migration flows have slowed down: in 2019, the closing balance was +143,000, i.e. 32,000 less than in 2018.

Employment by sector (000), 2019



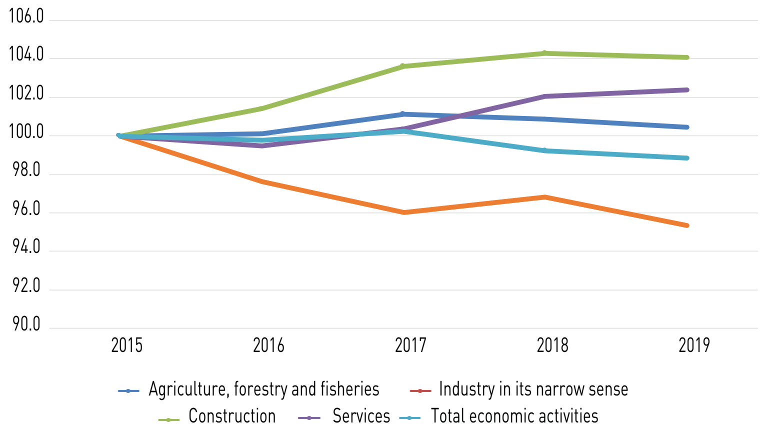
TOTAL	25,502
Agriculture, forestry and fisheries	940
Industry in its narrow sense	4,280
Construction	1,527

Source: ISTAT, National Accounting.

PRODUCTIVITY

According to ISTAT, once again in 2019 labour productivity decreased compared to the previous year. The slowdown in the growth of the Italian economy continued and the gap with the euro area widened. Overall, the added value per hour worked in 2019 was down 0.4% compared to 2018 (it was -0.2% in 2018). Labour productivity in agriculture declined (-0.4%), but the sharpest decline was in industry in the narrow sense (-1.5%). The services sector was the only one with any growth (+0.3%). According to Eurostat, the index of agricultural labour productivity in the EU increased slightly, reaching 123.1 (base year 2010=100, +2% compared to 2018). Labour productivity in agriculture is growing mainly in Denmark, Estonia and Germany, but not in Italy, France and Spain, the countries that contribute most to the EU's agricultural income.

Labour productivity - value added at chain-weighted base prices per hour worked - indices 2015=100



Source: ISTAT.

The bioeconomy encompasses those economic activities that use renewable organic resources from the land and sea - such as agricultural crops, forests, terrestrial and marine animals and micro-organisms, and organic waste - to produce food and feed, materials, energy, and services.

In 2019, the turnover of the Italian bioeconomy amounted to over 324 billion euro. The agro-food industry plays a fundamental role in the Italian bioeconomy. Among the other industrial sectors, the role of the textile, fashion and tanning industries stands out, as well as that of the pharmaceutical industry, where about 50% of turnover is made up of bio-based products. Italy, together with Germany and France, has a leadership position in all sectors of the bioeconomy. It is the leading European country for number of processing plants for the production of biomaterials and chemical and pharmaceutical products of organic origin.

During 2020, in line with the National BIT II Strategy, Italy has put in place an action plan for the 2020-2025 period including a series of targeted actions grouped into 4 main macro areas (policies/standards, pilot actions, regeneration of ecosystem services and stakeholder involvement), identifying concrete projects for investments in the bioeconomy and legislative proposals for overcoming the constraints to its development. A plan for disseminating and monitoring the results is also included in the document.

The turnover of the bioeconomy in Italy (million euro)

	2018	2019	Var. 2019/18
Agriculture, forestry and fisheries	60,632	60,626	-0.01
Food industry	142,571	147,133	3.20
Paper and pulp	23,566	23,212	-1.50
Manufacture of wood products	26,657	26,472	-0.69
Manufacture of biotextiles	36,885	37,770	2.40
Bio-based chemicals	5,890	5,630	-4.40
Bio-based pharmaceuticals	15,052	14,555	-3.30
Bioplastics	2,171	2,149	-1.00
Biofuels	178	184	3.12
Bioelectricity	6,413	6,413	0.00
Bioeconomy	**320,014**	**324,145**	**1.29**

Source: CREA estimates.

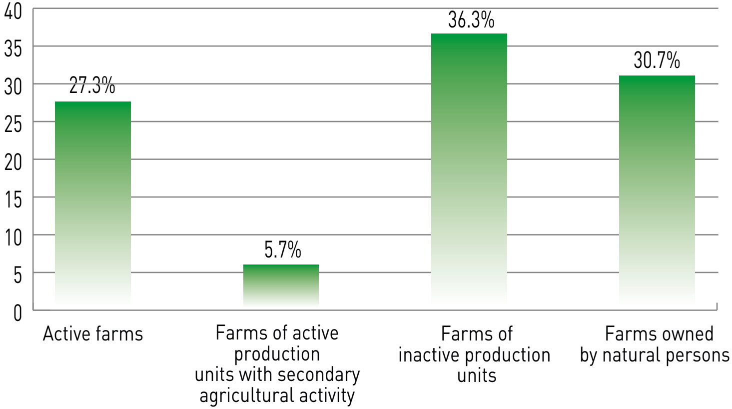
FARMS

ECONOMIC UNITS BY TYPE

ISTAT has published the preliminary results relating to the Farm register, produced as part of the preparatory activities for implementing the General Agricultural Census of 2020. As a result of the integration of statistical registers and administrative data, it includes not only farms , but all economic units in the agricultural sector. In particular, different types of economic units operating in the agricultural sector have been identified. In addition to farms practising agriculture as their main or secondary activity and those run by natural persons, a very large proportion of the identified units (over 36%) are farms of non-active production units[2].

Published data referring to 2017 estimate more than 1,500,000 economic units, with a total UAA of about 12.8 million hectares and an average of 8.4 hectares, with an average standard production of about 39,000 euro.

Economic units in the Farm register



Source: ISTAT.

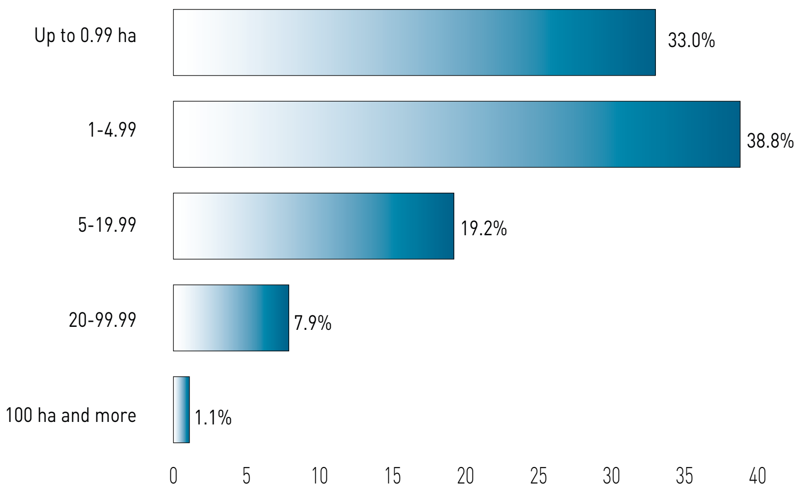
[1] *Agricultural and livestock farm: a technical/economic unit, consisting of land, even in non-contiguous plots, and possibly various facilities and equipment, in which agricultural and livestock farming activities are carried out, either principally or secondarily, by a tenant farmer - a natural person, a company, or an entity - who bears the risk, either alone, as a tenant farmer or as a tenant farmer with employees and/or partners, or as an association (ISTAT Glossary).*

[2] *A farm is considered to be active in a given period if it generates turnover, employs staff or makes investments in the period.*

ECONOMIC UNITS BY UAA CLASS

At the territorial level, there is a greater concentration of economic units in the South of the country, where almost 60% of the units are located, while the rest are equally distributed between the Centre and the North.
In general, these are rather small entities: two thirds of them have a surface area of less than 5 hectares, and more than 30% are micro-farms with a surface area of less than one hectare. Conversely, the units with surfaces exceeding 100 hectares represent a very residual share.

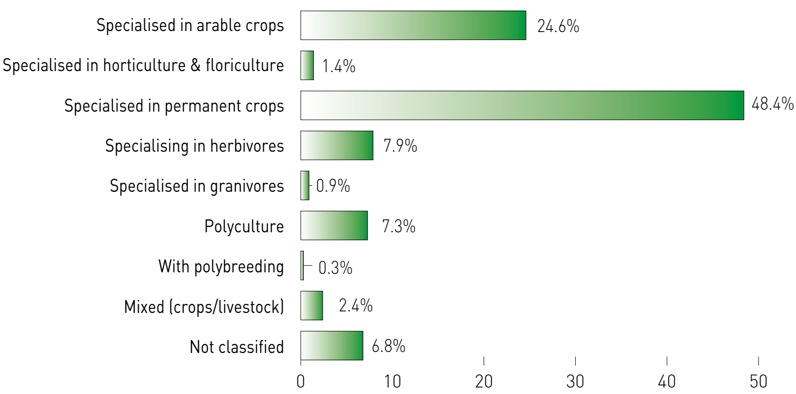
Percentage distribution of economic units by UAA class



Source: ISTAT.

ECONOMIC UNITS BY TF

Percentage distribution of economic units by TF



Source: ISTAT.

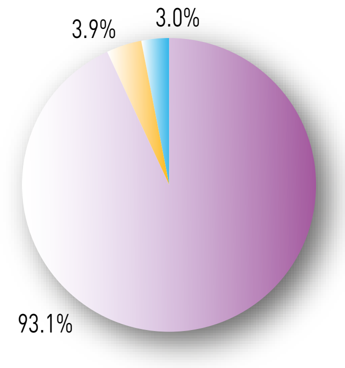
Among the productive systems, the prevalent ones are permanent crops, to which more than 48% of the units are dedicated, followed by arable crops, a sector of specialisation that involves about a quarter of the farms in the register (fig. 3). Among specialised livestock farms, herbivore ones (cattle, sheep and goats) are more widespread, while granivore farms appear less significant.

AGRICULTURE, FORESTRY AND FISHERIES

PRODUCTION OF THE AGRICULTURE, FORESTRY AND FISHERIES SECTOR

In 2019, the value of production of the agriculture, forestry and fisheries (AFF) branch reached almost 61.6 billion euro in current values, with a growth of 0.4% compared to the previous year, a summary of a contraction in the volumes produced (-0.7%), more than offset by the rise in the prices of products sold (+1.1%). However, the added value of the branch decreased by 0.4% due to a further increase in intermediate consumption (+1.4%).
The overall share of the AFF branch on the national economic system, after a few years of stagnation, showed a slight decrease, settling at 2.1%.
The overall positive result of the branch's value of production should be attributed to the dynamics of all its three components. However, it should be noted that the most significant changes came from fishing, which recorded a substantial increase (+7.2%), driven by a positive variation in prices as well as a more modest increase in product volumes; variations that were accompanied by an improvement in added value (+7.6%). Forestry showed an increase in production of only 0.6%, supported only by price increases, with also a modest positive change in added value (+0.2%). Fishing and forestry are still marginal compared to agriculture, which accounts for more than 93% of the branch total.

Composition % of value of output of agriculture, forestry and fisheries branch, 2019



	milion euro
Agriculture	57,316
Forestry	2,389
Fishing	1,876

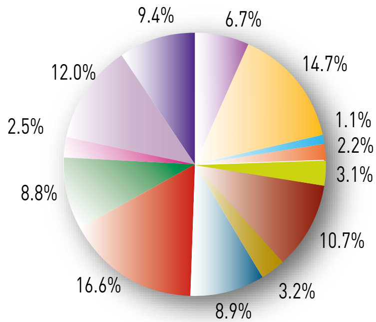
Source: ISTAT.

The value of domestic agricultural production exceeded 57.3 billion euro in 2019. Of this amount, 29,495 billion is represented by plant crops, 16,320 billion by livestock products and the remaining part by diversification activities (supporting and secondary).

The stationary nature of production (+0.1%) derives from variations in opposite directions between the trend of product volumes (down by -0.8%) and that of prices (up by +1%), which with reference to the added value have been translated into a more significant overall negative variation (-0.7%). Moreover, the final result is a synthesis of a contraction in the value of the plant component, which was offset by a positive change in the livestock sector and above all in support and secondary activities.

From a territorial point of view, the trend in added value showed significant differences between areas of the country. In the South, with the exception of a limited number of cases, the trend has been posi-

Production of goods and services at basic prices of the agricultural sector - Values at current prices (million euro), 2019



Grains and dried legumes[1]	3,926
Vegetables[2]	8,583
Industrial crops[3]	629
Floriculture	1,269
Forage	1,787
Wine products	6,223
Olive products	1,873
Fruit and citrus fruits	5,204
Meats	9,703
Milk	5,142
Eggs and other[4]	1,474
Support activities to agriculture	7,005
Secondary activities (+)[5]	5,499

[1] Dried pulses (180 million euro)

[2] Of which potatoes (749 million euro) and fresh beans (293 million euro)

[3] Sugar beet (77 million euro), tobacco (199 million euro), sunflower (64 million euro), soya (257 million euro)

[4] of which honey (64 million euro)

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

Source: ISTAT.

Value of output and services at basic prices by major industry, 2019

	Current Values		% changes 2019/18		
	million euro	%	on current values	on concatenated values	implicit prices
Production of agricultural goods and services	52,820	92.2	0.2	-1.0	1.1
- Herbaceous crops	14,407	25.1	6.5	-0.2	6.7
- Woody crops	13,300	23.2	-7.0	-3.9	-3.1
- Fodder crops	1,787	3.1	-4.9	3.4	-8.3
- Livestock farms	16,320	28.5	0.9	-0.2	1.1
- Support activities to agriculture	7,005	12.2	2.2	0.8	1.3
Secondary activities (+)1	5,499	9.6	1.3	0.7	0.6
Secondary activities (-)2	1,003	1.7	8.2	0.3	7.9
Agricultural production	**57,316**	**100.0**	**0.1**	**-0.8**	**1.0**
Intermediate consumption (including Sifim)	25,727	-	1.2	0.3	0.9
Agricultural added value	**31,589**	**-**	**-0.7**	**-1.7**	**1.0**

[1] Agricultural activities such as agro-tourism, processing of milk, fruit, meat, etc.".
[2] Activities performed in agriculture by other economic branches. They are substracted by value and weight %.
Source: ISTAT.

tive, while in the remaining areas of the country almost all of them have recorded a downward trend, with the sole exception of a few regional realities of modest relative weight. The better result achieved by the southern part of the country is due to the positive trend shown during the year by some specific productive sectors typical of that territorial context.

In the EU 28, the value of agricultural production increased slightly compared to the previous year, thanks to the good

Agricultural production value at basic prices, Value added and Indicator A for main EU countries, current values in million euro (2019)*

	EU 28	France	Germany	Italy	Spain	UK	Netherlands	Poland
Agricultural production of goods	404,873	68,673	53,279	46,695	48,908	28,284	25,280	25,736
Agricultural production of services	21,378	4,614	2,565	5,114	544	1,417	2,681	565
Secondary activities (not separable)	16,812	2,377	971	4,706	1,206	1,570	829	84
Production of the Agricultural branch of activity	**443,063**	**75,663**	**56,814**	**56,515**	**50,657**	**31,271**	**28,791**	**26,386**
Intermediate consumption	254,333	44,392	35,762	24,740	24,101	19,598	17,560	15,983
Gross added value at basic prices	**188,730**	**31,271**	**21,052**	**31,775**	**26,556**	**11,673**	**11,230**	**10,403**
Agricultural income indicator A (% change)	**+3,0**	**-7,4**	**+24,6**	**-3,0**	**-8,6**	**+7,3**	**+2,1**	**+4,4**

* 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.

performance of plant crops (grains, vegetables, olive oil) and pork. France remains the main European agricultural producer, followed at a distance by Germany and Italy, while, in terms of added value, Italy is firmly in first place. These three countries, together with Spain, account for more than 50% of Community agricultural production.

In 2019, intermediate consumption expenditure in the EU remained broadly stable thus leading to a 2.1% increase in added value. This contributed to an improvement in real agricultural income per employee, as expressed by Eurostat's Indicator A, which increased by 2.8 points on average in 2019. Overall, the indicator is growing in 20 countries, although negative changes have been recorded in those with the most important agricultural weight, including France, Spain and Italy. Fifty-three per cent of the total value of the Community's agricultural production consists of plant products, while animal production, for which Germany is the leading producer, accounts for 41.5 per cent. Finally, it should be noted that the agricultural production of services and secondary activities carried out by our country is the highest, representing a share of about 30% of the entire EU.

PLANT PRODUCTIONS

Plant productions, as a complex of herbaceous, woody and fodder crops, is confirmed as the main component of national agricultural production, with a share of 51.5% of the total. The slight decrease recorded by the value of production, compared to the previous year (-0.7%), is the result of a different behaviour among the main sectors. Positive changes characterised herbaceous crops, while negative changes concerned fodder crops and, above all, woody crops. The production result was strongly influenced by a spring characterized by unfavorable weather conditions (rain and low temperatures), as well as by the spread of some parasitic agents, which particularly affected the tree production.

In detail, the vines underwent an abrupt reduction, but the grapes were nonetheless favored by a hot, dry summer, which allowed for good ripening and resulted in a quality vintage. The olive oil sector showed a clear recovery after the strong contraction of the previous year (+30%), whose growth is partly due to the first positive results of the measures to fight xylella fastidiosa and the oil fly. The performance of herbaceous crops is a synthesis of rather differentiated situations: industrial crops showed signs of distress linked to more than one product, including sugar beet in particular, which continues to be affected by the progressive dismantling of processing plants. The presence of opposing trends also characterised the grain sector, which saw an increase in the surface area under maize, to the detriment of wheat. The vegetable sector, despite some internal differences between areas and products, strengthens its position, especially in the European context. Italy is at the top of the list of producers, surpassing Spain.

Main plant crop production, 2019

	Quantity		Value[1]	
	000 t	% change 2019/18	000 euro	% change 2019/18
Wine (000 hl)	21,313	-11.6	3,801,258	-17.5
Oil	344	32.0	1,611,196	29.6
Grapes delivered and sold	3,760	-8.0	1,779,080	-3.1
Forages (in hay)	0	-	1,787,483	-4.9
Nurseries	0	-	1,445,071	3.3
Durum wheat	3,849	-7.1	1,217,897	-0.6
Flowers and ornamental plants	0	-	1,269,396	8.9
Hybrid corn (maize)	6,276	1.6	1,147,675	-2.2
Tomatoes	5,799	0.0	1,148,597	25.5
Fennel	514	-2.0	1,054,331	16.9
Potatoes	1,338	2.4	749,050	17.1
Apples	2,366	-4.1	858,325	-21.5
Family gardens	1,797	1.3	725,153	9.0
Lettuce	466	-4.4	609,750	3.2
Table grapes	988	-3.9	627,345	-7.8
Oranges	1,588	-0.3	474,795	-17.2
Zucchini	562	0.3	478,626	-5.8
Common wheat	2,727	-2.2	523,204	-6.0
Artichokes	379	-2.8	478,735	20.5
Pears	490	-34.9	449,869	-9.4

[1] Output at basic prices expressed at current values.
Source: ISTAT.

LIVESTOCK PRODUCTIONS

The total share of the livestock sector in the total national agricultural production stood at 28.5% in 2019. The growth in value of the sector, equal to +0.9%, is the result of an increase in food products (+0.9%) which more than offset the decrease in non-food products (-0.8%).
More in detail, among food products, only meat showed a falling trend in the value of production (-0.9%), determined by the contraction of prices (-0.8%) against a substantial stability of the quantities sold. The reduction was generated by the decrease in volumes and prices of beef; while, rabbits, game and minor farms, as well as sheep and goat meat showed only a slowdown in volumes. For all other products, the value of production increased due to both the growth in production volumes and the good price trend. The exceptions are cow's milk and honey, where the fall in quantities sold (especially substantial in the case of honey) was largely offset by price changes. Lastly, the value of sheep and goat milk production rebounded, due to government programs implemented during the year to lower raw material prices.

Main livestock productions, 2019

	Quantity[1]		Value[2]	
	000 t	% change 2019/18	000 euro	% change 2019/18
Cow and buffalo milk (000 hl)	119,609	-0.8	4,682,470	4.0
Pigs	2,130	2.4	3,006,312	3.4
Cattle	1,164	-1.4	2,910,664	-2.3
Poultry	1,858	1.4	2,764,915	0.5
Eggs (million units)	12,810	1.2	1,398,714	2.2
Rabbits, game and poultry farming	256	-9.9	756,982	-0.7
Sheep's and goat's milk (000 hl)	5,978	0.4	459,941	4.2
Sheep and goats	58	-1.5	163,635	0.6
Equines	42	1.2	100,580	3.4
Honey	8	-3.8	64,497	4.8

[1] Live weight for meat
[2] Output at basic prices expressed at current values.
Source: ISTAT.

DIVERSIFICATION

Also in 2019, the dynamics related to the components of diversification in agriculture are confirmed to be significant. The combined value of agricultural production linked to support and secondary activities again exceeded 20% of the total, with the former contributing more than 12% and the latter almost 8%.

Both components grew both in value and volume, as a result of quite different trends among the various items that compose them.

Support activities contributed to the positive trend, among which contracting activities showed a further strengthening (+1.7%), and first-stage processing of agricultural products, which grew again (+3%), confirming its position as the second most important item in this aggregate.

Among secondary activities, the production of energy from renewable sources confirms its leading role, although it shows a decrease; while the value of agricultural production linked to agritourism and the minor activities connected to it grows by 3.3%. Significant growth in direct sales activities should also be noted.

Supporting and secondary activities play a significant role throughout the country, but are slightly higher than average, especially in some regions of the Alpine arc (Valle d'Aosta, Trentino-Alto Adige and Friuli Venezia Giulia), in the Centre, with the sole exception of Lazio, and in a few cases in the South (Molise, Basilicata, Sardinia).

Production of supporting and secondary activities of the agriculture branch, 2019

	Current Values (milion euro)	% change current values 2019/18	% change chain-weighted (2015) 2019/18	Weight %
SUPPORT ACTIVITIES				
Seed processing for sowing	241	1.1	-0.7	3.4
New crops and plantations	187	1.2	-0.3	2.7
Agricultural contract work (Contract work)	3,210	1.7	0.8	45.8
First processing of agricultural products	2,362	3.0	1.1	33.7
Ground maintenance	603	3.2	1.5	8.6
Support activities to livestock breeding	212	-0.3	0.2	3.0
Other support activities	191	1.2	0.3	2.7
Total	7,005	2.2	0.8	100.0
SECONDARY ACTIVITIES				
Aquaculture	8.2	3.1	2.0	0.1
Processing of plant products (fruit)	183	-1.9	-2.0	3.3
Milk processing	293	3.8	-0.6	5.3
Agritourism, recreational and social activities, educational farms	1,506	3.3	1.5	27.4
Processing of animal products (meat)	335	2.6	2.1	6.1
Renewable energy (photovoltaic, biogas, biomass)	2,202	-1.4	-0.2	40.0
Handicraft (woodworking)	63	3.1	1.5	1.1
Feed production	186	2.0	-0.9	3.4
Parks and gardens	371	4.2	2.0	6.7
Direct sales/marketing	351	4.3	3.8	6.4
Total	**5,499**	**1.3**	**0.7**	**100.0**

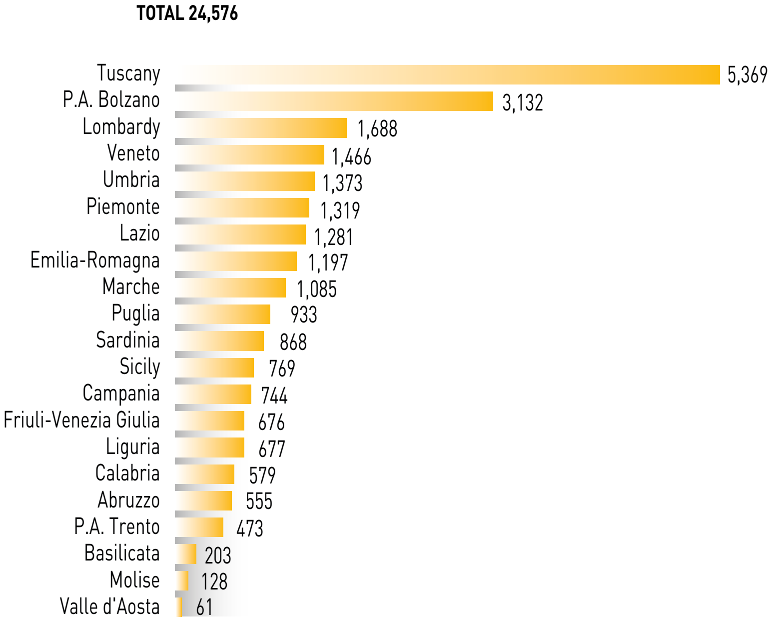
Source: ISTAT, Economic Accounts of Agriculture.

AGRITOURISM

The agritourism companies, 24,576 units in 2019, marked an increase of 4.1% compared to the previous year, with greater growth in the regions of the Centre (+8.7%) and a current value of agritourism production of 1.5 billion euro (+7.9%). The facilities are widespread throughout the country and are present in 63% of municipalities, with virtually total coverage in Tuscany (97% of municipalities). In 2019, arrivals in these facilities (3.7 million tourists, of which 51% were foreign nationals) showed a significant increase (+8.8% compared to 2018). Thanks to the diversification of the services offered (more than 30% of the structures offer at least three types of activities) and to the peculiarities of the cultural, gastronomic and naturalistic context of the hosting territories, agritourisms represent an element of strength for the Italian productive fabric and in particular for rural areas; almost 84% of the structures, in fact, are in mountain and hill areas, contributing to the maintenance of agriculture and the protection of the territory. The role of women in the sector is significant, with 8,566 agritourisms managed by women, about 35% of the national total, with a quota that rises to 47% in the southern regions.

The Covid-19 pandemic, with the blockage of tourist flows, has inevitably led to the cancellation of the activity in correspondence with the generalised measures of social distancing and the agritourisms, considered non-essential accommodation facilities, have had to close with obvious repercussions on the sector and the induced activities.

Agritourism farms by region, 2019



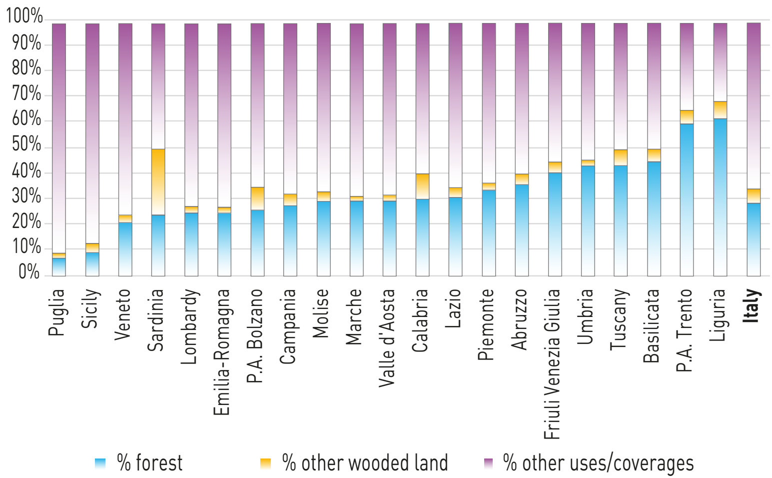
Source: ISTAT.

Forest surface area

The third National Forest Inventory (INFC 2015) confirms the steady growth of the Italian forest surface area in the last decades, reaching almost 11 million hectares (36% of the national surface area). The forest surface area has increased by 514,480 hectares (+4.9%) in the last 10 years. Each year the forest grows by 52,856 hectares. This increase is mainly due to the decrease in agricultural pressure in inland areas, allowing the forest to colonize the previously cultivated surface area (neoformation forests).

41.8% of the forest surface area is covered by coppice, while 34.3% is covered by high forest. The remaining surface area (23.9%) consists mainly of stands that are not subject to any form of management, and at most are affected by sporadic interventions; it includes the areas abandoned by silvicultural practices because of stationary limits (impervious surfaces, rocky slopes or other limitations of the physical environment) and those of spontaneous

Forest surface area (%) by region



Source: National Inventory of Forests and Carbon Sinks (INFC 2015).

recolonization of abandoned cultivations.

Forests subject to forest management plans account for only 18% of the national surface area.

Indirect estimates of the levy rate lead to results ranging from a low of 18.4% to a high of 37.4% of the annual wood volume increase, compared to a significantly higher European average (+50%, Eurostat, 2017). Silvicultural interventions are

mainly carried out in coppices (about 50% more surface area than in high forests), but the wood mass harvested in high forests is more than 50% greater than in coppices. In terms of woody volumes taken, there is no substantial difference between broadleaves and conifers.
Privately owned forests account for 66.2% of the national total and are affected by silvicultural interventions for twice the surface area of publicly owned forests. The wood mass harvested is also approximately 50% higher than that harvested on public property.

Production

The trend of wood productions in different segments changes significantly from segment to segment. Firewood production has seen slight growth in recent years, while industrial wood in 2019 saw a 240% increase, due to woody material from forests felled during Storm Vaia that hit the North-East regions in October 2018. Wood chip production in 2019 also showed a 16% increase over the previous year.
The activity of the first transformation (sawmills and cutting and sizing companies) is unrelated to the actual use of the resource wood in our country, relying mainly on imports.
This activity is mainly rooted in the North-East of the country, with 60.5% of employees and 48.5% of companies concentrated in seven regions (Friuli Venezia Giulia, Trentino-Alto Adige, Veneto, Lombardy, Emilia-Romagna, Umbria and Marche). The paper and cardboard sector declined slightly. The wood building sector, one of the most innovative, is growing: Italy is in fact in 4th place in Europe for the production of prefabricated wood buildings. Residential production is worth 571 million euro (+14% on 2017) and non-residential 153 million euro (+23% on 2017)[1].

Trends in wood and paper-based products

Type of product	unit of measure	2016	2017	2018	2019
Wood chips, particles and wood residues	m^3	5,280,000	5,280,000	5,280,000	5,546,218
Pellets and other wood composites	t	460,000	445,000	497,000	497,000
Sawn timber (including railway sleepers)	m^3	1,500,000	1,520,000	1,554,200	1,554,200
Wood-based panels, peeled and sliced	m^3	3,810,000	3,777,975	4,705,952	4,248,332
Wood pulp	t	392,010	388,347	369,148	333,776
Paper and cardboard	t	8,888,000	9,071,483	9,081,000	8,901,053

Source: FAOSTAT.

Companies and employees

The forestry and forest work sector involves 5,685 forest companies with 7,349 employees (an average of 1.29 per enter-

[1] *IV° Rapporto Case e edifici in legno, FederLegnoArredo, 2020.*

prise). 72% of businesses are sole proprietorships and only 7% are corporations. From 2011 to 2017, the total number of businesses was virtually unchanged nationally (+0.16%). In some regions of central and southern Italy, the number of companies has strongly decreased, while it has increased in Liguria, Lombardy and Calabria.

There are about 47,313 forestry workers in regional administrations, of which 6% are in northern regions, 2% in central regions and 92% in southern regions. The employment of labourers is highly differentiated from region to region, preventing an interregional comparison: the types of employment, the duration of contracts and the tasks, such as forestry work, hydraulic-forestry systems or fire-fighting activities, vary.

Companies and employees in forestry, 2017

	Companies	Employees
	(no.)	
Piemonte	583	222
Valle d'Aosta	14	10
Lombardy	570	473
Liguria	197	104
Trentino Alto adige	404	300
Veneto	258	141
Friuli-V.G.	203	143
Emilia-Romagna	280	210
Tuscany	916	1.513
Umbria	276	1.005
Marche	101	108
Lazio	343	438
Abruzzo	165	187
Molise	51	50
Campania	371	460
Puglia	106	290
Basilicata	125	204
Calabria	520	1,084
Sicily	83	173
Sardinia	119	234
ITALY	5,685	7,349

Source: ISTAT - Registro statistico delle imprese attive (ASIA)

The fishing fleet

The Italian fishing fleet as at 31 December 2019 stood at 11,984 vessels, recording a change compared to 2018 of only 48 vessels (-0.4%). The total gross tonnage expressed in GT was 145,678 tonnes and the engine power was 929,144 kW. Compared to 2018, the size of the fleet and associated fishing capacity remained almost unchanged, with slight negative declines.

In 2019, the size of the fleet used in the different fishing systems follows a similar trend to the previous year. The largest use is by small-scale or artisanal fishing, which puts 8,132 boats in the water, representing 67.9% of the entire fleet. In second place, far less impressive in terms of size but greater in terms of tonnage, is the fleet operating with towed gear (DTS and TBB), which numbers 2,086 vessels (17.4% of the total). This is followed by the segment of hydraulic dredgers (DRB), with 705 active vessels,

Italian fishing fleet

	Boats (no.)	GT gross tonnage (t)	Engine power (Kw)
2018	12,032	146,134	930,235
2019	11,984	145,678	929,144
% change 2019/18	-0.40	-0.31	-0.12

Source: CREA calculations based on EC MSs Fleet capacity report data.

Fleet by fishing system, 2019

Fishing system	Boats (no.)	% on tot	Gross tonnage GT (t)	Engine power (Kw)
Bottom trawling and quick trawling (DTS and TBB)	2,086	17.4	85,600	429,279
Hydraulic dredgers (DRB)	705	5.9	9,316	76,371
Pair or trawling (TM)	108	0.9	7,174	36,681
Purse-seining (PS)	365	3.0	11,472	59,797
Longline (HOK)	234	2.0	5,530	40,656
Small-scale fishing (PGP <12 m)	8,132	67.9	14,882	218,729
Multi-purpose passive (PGP> 12 m)	345	2.9	5,468	54,568
Mediterranean Fleet	**11,975**	**99.9**	**139,442**	**916,080**
Bottom trawling (DTS)	8	0.1	4,099	9,374
Purse-seining (PS)	1	0.0	2,137	3,690
Long distance fleet	9	0.1	6,236	13,064
Italy	**11,984**	**100.0**	**145,678**	**929,144**

Source: CREA calculations based on EC MSs Fleet capacity report data.

which accounts for 5.9% of the national fleet. Finally, among the smaller fishing systems in terms of size, there are: the vessels using purse seines (PS) for bluefin tuna fishing (365 vessels), those using longline (234 active units), those using polyvalent passive gears (345 units), the fleet equipped with pair trawl gear (TM), which represents less than 1% of the Italian fleet.

Catches and value of production by fishing systems

In 2019, the Italian fleet caught a catch of 176,738 tonnes, with a total economic value of 891.7 million euro. The prevailing segment is that of trawling which, with about 66,000 tonnes, absorbs a share equal to 37% of the Italian catch. The economic contribution of this fishing system is predominant thanks also to the high value of the catch, in fact the main target species are red shrimps and scampi, which have reached a unitary sale price on the market of more than 20 euro per kg. The total turnover of this system was more than 480 million euro, or 54% of the total catch. Pair trawling is in second place with almost 36,000 tonnes of landings (20% of the national total), but its commercial value is much lower than trawling as it is mainly oriented to small pelagic fishing, with a total turnover of only 68 million euro, 8% of the total value of landings. The purse-seining fishing system absorbs a modest share both in terms of products fished (15% of the national total) and in economic terms (9%), and is mainly used for bluefin tuna fishing.

They are followed by small-scale fishing vessels in terms of relevance, which in 2019 recorded a revenue of as much as 150 million euro, 17% of the total Ital-

Catch and value of production by fishing system, 2019

Fishing system	Catches (t)	% of total catch	Economic value (million euro)	% on tot. value
Bottom trawling and quick trawling (DTS and TBB)	66,244	37	480.1	54
Pair or trawling (TM)	35,814	20	68.3	8
Purse-seining (PS)	25,817	15	81.3	9
Small-scale fishing (PGP <12 m)	20,870	12	149.8	17
Hydraulic dredgers (DRB)	19,810	11	57.3	6
Longline (HOK)	4,102	2	24.1	3
Multi-purpose passive (PGP> 12 m)	4,081	2	30.8	3
Italy	**176,738**	**100**	**891.7**	**100**

Source: elaborazioni CREA su dati EC MSs Fleet capacity report.

ian turnover, with a quantity of landings of almost 21 thousand tonnes. Gradually lower values are reported for the other fishing systems that use hydraulic dredges (19 thousand tonnes and a commercial value equal to 6% of the total turnover) and especially longlines and polyvalent passive gear with a catch of just over 4,000 tonnes of fish and a commercial value equal to 3% of the total.

A remunerative segment is the small fishing that employs boats smaller than 12 meters and is practiced almost along all the Italian coasts, boasting catches of species with a modest commercial value.

Geographical distribution of the fleet and catches

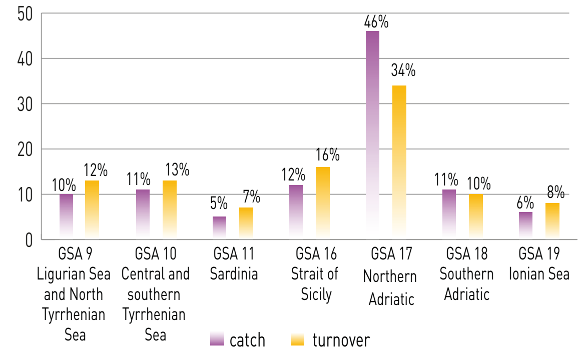
Examination of the geographical distribution shows that the Italian fleet is predominant in the Northern Adriatic area and in the Strait of Sicily (GSA 17 and GSA 16 respectively), from which the highest production value is obtained. The Northern Adriatic Sea accounts for 46% of total landings, with over 80 thousand tonnes of fish, for an economic value of 298 million euro, equal to 34% of the national total. In southern Sicily the volume of landings (over 20 thousand tonnes) is equal to 12%, while revenues amount to 146 million euro (16% of national revenues). Production is also significant in GSA 10 (Central-Southern Tyrrhenian Sea) and 18 (Southern Adriatic Sea), where landings amount to about 19,000 tonnes in total. In these areas, however, the high percentage of pelagic species in the catch composition returns a much lower economic value than in the previous areas.

The main species caught and their economic value

The composition of the national catch is structurally concentrated on anchovies and sardines. These species account for more than 30% of the total landings recorded in 2019. Anchovies alone, with over 31,000 tonnes, account for almost 18% of national catches. Sardines, with more than 23,000 tonnes, hold a 13% share. Both species show a 10% decrease from 2018. Also relevant is the catch of clams (19,000 tonnes) and Mediterranean pink shrimps (9,000 tonnes). Cod recorded 7,000 tonnes of landings (+3% compared to 2018), while mullet showed a significant decrease in landings, 4,972 tonnes (-26%). Cuttlefish, at 4,698 tonnes, also fell sharply. The top ten species fished include bluefin tuna and octopus.

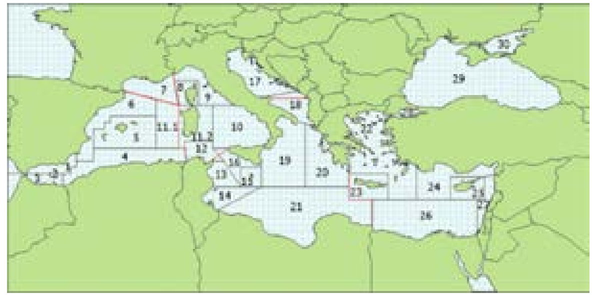
Among the top ten species fished, anchovies rank first in economic value (71.2 million euro). They are followed by pink shrimps with 61.6 million euro, red shrimps with 52.9 million euro and clams with 51.4 million euro. Compared to 2018, anchovies and pink shrimp increased their value (+5% and +8%, respectively). On the contrary, revenue from cuttlefish declined sharply (-35%), and more moderately from hake (-3%) and red shrimp (-1%).

Incidence of catches and commercial value by GSA (Geographical Sub-areas), 2019



Source: CREA processing of EC MSs data Fleet capacity report.

The geographical sub-areas in Italy, 2019



Source: GFCM, General Fisheries Commission for the Mediterranean.

In 2019, the average price of the catch stood at €5.09/kg, up significantly from €4.86/kg recorded in 2018, partly offsetting the lower catch. It is noteworthy that the 2019 price is the highest recorded since 2011 and, with the exception of 2018, continues the upward trend inaugurated since 2014.

Top 10 species caught in Italy, 2019

Species	Catch (t)	% on tot
Anchovy	31,068	17.58
Sardine	23,317	13.19
Clam or lupin	18,706	10.58
Mediterranean pink shrimp	9,011	5.10
Cod	7,040	3.98
Mud mullets	4,972	2.81
Sepia	4,698	2.66
Hake	3,949	2.23
Bluefin tuna	3,913	2.21
Octopus	3,813	2.16
Subtotal 10 species	**110,487**	**62.51**
Total Italy	**176,738**	**100**

Source: CREA calculations based on EC MSs Fleet capacity report data.

The 10 main species by economic value in Italy, 2019

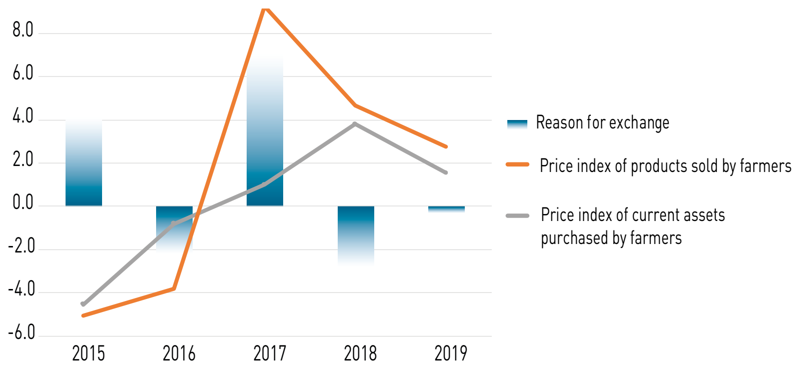
Species	Economic value (million euro)	% on tot
Anchovy	71.2	8.02
Mediterranean pink shrimp	61.6	6.94
Red Prawn	52.9	5.96
Clam or lupin	51.4	5.79
Hake	49.1	5.53
Sepia	48.2	5.43
Bluefin tuna	40.3	4.54
Octopus	33.8	3.81
Sardine	30.3	3.41
Norway lobster	30.0	3.38
Subtotal 10 species	**468.8**	**52.83**
Total Italy	**887.4**	**100**

Source: CREA calculations based on EC MSs Fleet capacity report data.

PRICES AND COSTS

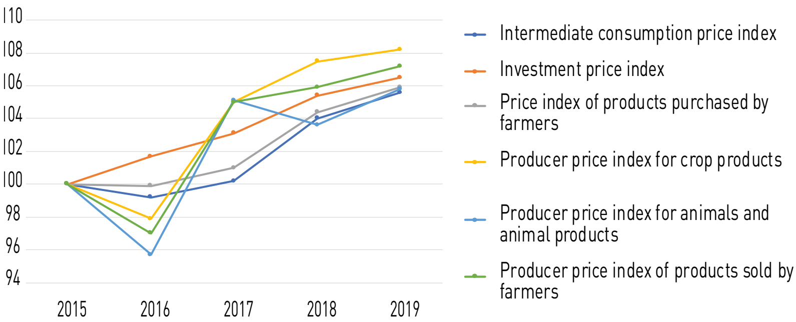
In 2019, the agricultural sector's terms of trade, calculated as the ratio of the producer price index to the intermediate consumption price index, remains at very similar levels to the previous year, albeit slightly down due to a slightly higher increase in the intermediate consumption price index (+1.5%) than in the price index of products sold by farmers (+1.2%).
The medium-term trend (2015-2019) is in any case favourable, showing an increase in production prices (+7.2%) greater than the growth that affected the prices of current means (+5.6%), with positive implications, therefore, on the terms of trade (+1.5%). Even if investments are included among the productive inputs, whose prices rise by 7%, the ratio between sale and purchase prices grows at a slightly lower rate (+1.2%).
Breaking down the indices, it appears that the increase in the intermediate consumption component depends on the increase in almost all cost items, particularly veterinary expenses whose change amounts to 5%. This growth is slowed by a decline in feed costs of just under 1%. The prices of capital goods also rose, due to similar changes affecting the different categories of capital goods, but at a lower rate than that of current assets (+1%). In the medium term, there is an increase that involves almost all the items of current means, affecting in particular veterinary expenses (+14%), costs for energy and lubricants (+12%) and pesticides (+10%). Slowing this increase is the expenditure on fertilizers and soil improvers, which

Price index of products bought and sold by farmers - index numbers (2015=100)



Source: ISTAT.

Price index of products bought and sold by farmers - index numbers (2015=100)



Source: ISTAT.

has decreased by 5%. Unlike current assets, all categories of capital goods show positive changes, reaching 8% in the case of capital goods.

The increase in the index of prices of products sold by farmers is the result of the increase in the prices of animals and their derivatives (+2%) while the prices of plant products remained substantially unchanged. The increase in prices in the livestock sector is mainly due to the positive trend in animal products (+4%), while the stability of prices for plant products is the result of opposing trends from which emerge, in particular, the increase in prices of fresh vegetables (+10%) and the reduction in wine prices (-9%). However, this trend does not reflect the medium-term trend, which is characterised by a rise in prices of plant products (+8%) that is higher than the livestock one (+6%). The former is driven by the dynamics of the forage (+26%), horticulture (+13%) and fruit (+10%) sectors, while the latter is supported by the pig (+5%) and animal products (+9%) sectors.

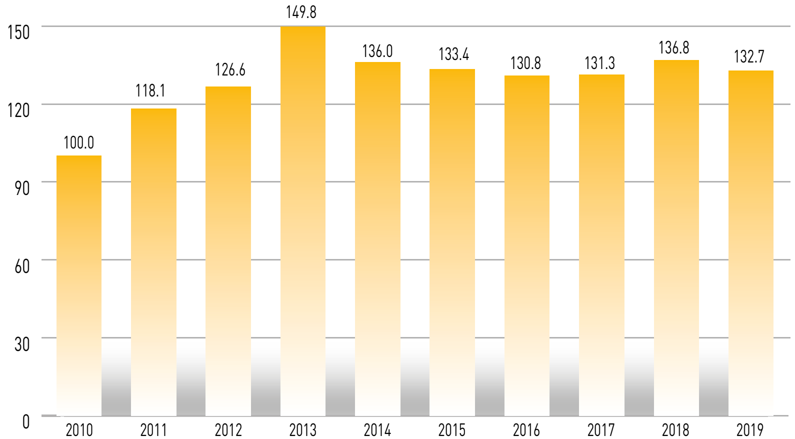
INCOME

The trend in the value of real agricultural income per labour unit, which corresponds to the total annual real net agricultural added value per labour unit at factor cost, as estimated by Eurostat, indicates a 3% decrease for Italy during 2019, compared to a slight increase of 2% for the EU countries as a whole.

It can be seen that, over the last ten years, the trend was increasing until 2013, while in the following years it stabilized on a level above 130.

Compared to the average value in moderate increase compared to 2018, in the individual EU countries the situation appears quite diversified: in some cases there are even substantial increases, such as Denmark (+40%), the Baltic Republics (+26%), Sweden (+22%) and Germany (+20%), in others the income contracts significantly more than in our country, this is the case of Slovenia (10%) or our direct competitors France (-8%) and Spain (-9%).

Index of real factor income in agriculture per annual labour unit in Italy (2010=100)



Source: Eurostat.

PRODUCTION FACTORS

INTERMEDIATE CONSUMPTION

The expansive phase in the consumption of agricultural technical means that has characterized recent years appears to be decelerating in 2019. The annual increase was just over 1%, mainly due to higher prices. Overall, intermediate consumption stood at 25.7 billion euro compared to 25.4 billion euro in 2018.

Most of the changes in the individual cost items follow the average trend, with a substantial stability in the quantities consumed against a slight increase in prices. Only in the case of re-use, unit values decreased significantly (-7%), while quantities increased (+3%), but the overall average change was negative (-4.6%).

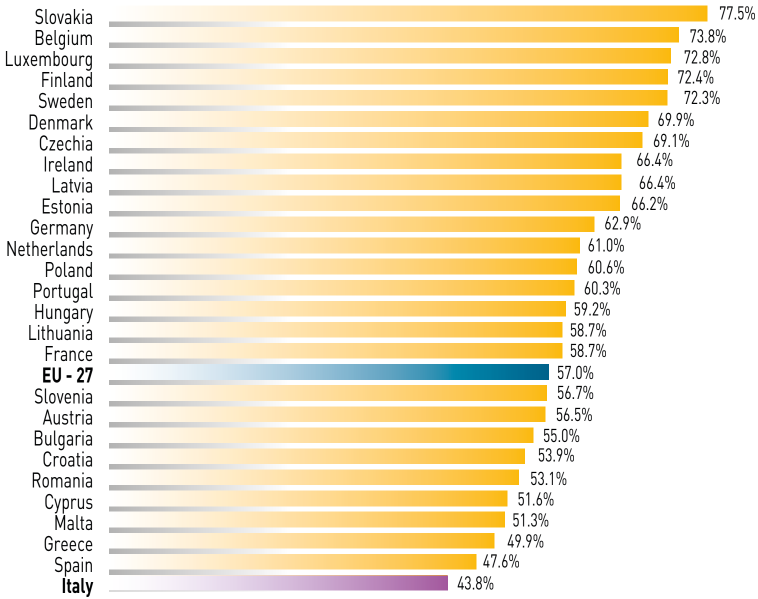
Feed and livestock expenses are the first specific expense among total farm consumption. The residual item of other goods and services, however, increases its incidence, indicating the growing importance of the costs of some services such as insurance. Energy costs are also on the rise, especially electricity consumption costs, which are up 10% on 2018.

Price indices for products purchased by farmers stabilised in the second half of the year, reversing the upward trend of the previous year.

In the other two branches of the primary sector, namely forestry fishing and aquaculture, changes in intermediate consumption were more pronounced, 2.8 and 6.8% respectively. Even in these cases, this growth is mainly driven by price dynamics. In particular, the increase was 5% in the fish sector and 1.7% in the forestry sector.

In the European context, the decreasing ranking by incidence of the value of intermediate consumption on total agricultural production almost perfectly separates the Mediterranean Countries from the others. Only France exceeds the EU27 average and is one of the few countries, along with Italy and Spain, to show an increase over 2018. Most of the changes are negative, indicating a generalised contraction in consumption that does not, however, follow the growth in the value of production (EU-27 average +1.7%). Considering that factor prices are tending to rise, this seems to be a rationalisation of consumption and therefore an increase in the efficiency of production systems. Confirming this situation is the trend of the index of the volume of intermediate consumption, which fell by about one point on the EU average. Finally, it is worth noting the growth in the incidence of intermediate consumption in Italy and Spain, a variation already noted in previous years and in countertendency to the contraction in production.

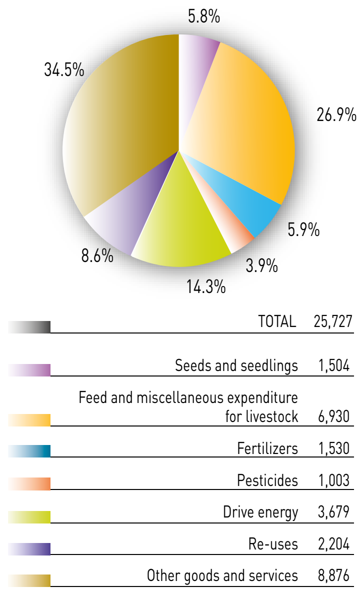
Intermediate consumption on agricultural production in the EU 28*, 2019



* Estimated value of agricultural production of goods and services at basic prices and intermediate consumption valued at current prices.

Source: Eurostat

Breakdown of intermediate consumption of agriculture in Italy (million euro current values), 2019



Source: ISTAT.

With 8.6 million people, 4.3% of total employment and 8.8 million standard units, agriculture still plays a significant role in the European Union, although it varies greatly from one Member State to another: it accounts for 21% of employment in Romania, but less than 1% in Belgium.
Italy is in an intermediate position (3.9%). The family nature of European agriculture is confirmed, as can be seen in the high incidence of non-salaried labour input, i.e. that coming from the farmer and his family members, also in this case with clear specificities per member country.
In Italy, in 2019, employment in agriculture increased but the amount of work in terms of standard units decreased, due to a lower contribution of the self-employed component that continues its slow downsizing.
Data for the first half of 2020 highlights how actions established by the government in order to contain the spread of Covid-19 have had a more muted effect on the agricultural sector. In the second quarter

Labour units in agriculture in the EU (000), 2019

	Totals	% un-salaried
Austria	115	82.9
Belgium	56	77.9
Bulgaria	190	65.3
Cyprus	22	70.9
Croatia	175	91.4
Denmark	54	44
Estonia	20	32.5
Finland	59	78.9
France	741	61
Germany	473	55.5
Greece	417	83.5
Ireland	161	91.8
Italy	1,126	66.7
Latvia	69	75.1
Lithuania	138	71.1
Luxembourg	3	68.3
Malta	5	90.7
Netherlands	158	52.9
Poland	1,676	89.7
Portugal	234	64.4
Czech Rep.	104	29
Romania	1,390	88.6
Slovakia	45	35.2
Slovenia	78	91.8
Spain	855	51.9
Sweden	55	59.7
Hungary	384	68
EU 27	**8,800**	**73.4**

Source: Eurostat.

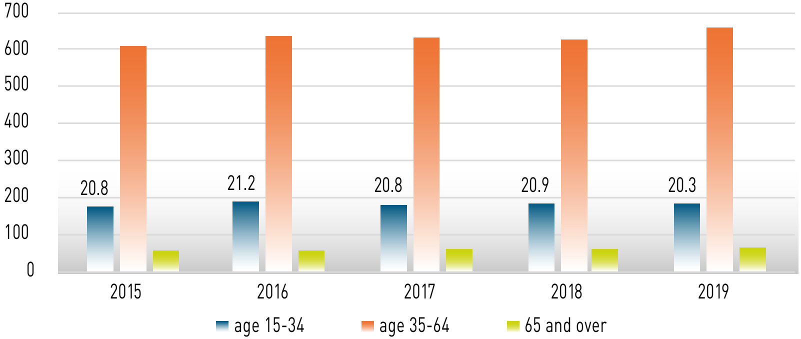
Employment trends in agriculture, forestry and fisheries, (000)

		2015	2016	2017	2018	2019
Employed	employees	444	463	470	479	482
	independent	470	474	452	459	458
	total	**913**	**937**	**922**	**938**	**940**
Working units	employees	409	429	435	445	447
	independent	836	847	816	824	821
	total	**1,244**	**1,277**	**1,251**	**1,269**	**1,268**

Source: ISTAT, National Accounting.

Note: The difference between the ISTAT figure and that reported by Eurostat depends on the different time at which the revisions take place.

Employment by age group in agriculture, forestry and fisheries (000)



Source: ISTAT, Labour Force Survey.

of 2020, in fact, employment in agriculture recorded a reduction of 2.4% compared to the same period of the previous year, still, lower than the economy as a whole.

Employment, changes over the same quarter of the previous year

	2019				2020	
	I quarter	II quarter	III quarter	IV quarter	I quarter	II quarter
Total	0.6	0.3	0.6	0.9	0.2	-3.6
Agriculture, forestry and fisheries	3.8	-1.8	4.3	10.5	4	-2.4

Source: ISTAT, Survey on the labour force.

According to ISTAT national accounts data, in 2019 the gross fixed capital formation in agriculture was 10,140 million euro in current value and 9,747 million euro in constant value (chain weighted, base year 2015). Compared to 2018, both values remain largely unchanged, with only a 0.3% increase in the current value and a 0.2% decrease in the constant value.

Analysis of the time series, however, shows significant increases over the past five years, both in terms of values and quantities. The increases in 2017 (+16% in value and 14.2% in quantity) and 2018 (+12.6% in value and +10.5% in quantity) were particularly significant.

The ratio between the value of investments and added value, both expressed in constant values, also shows a positive dynamic over the time period analysed (2015-2019), highlighting how over the years an increasing share of the sector's production is allocated to capitalisation.

The sums invested in 2019 were mostly allocated to the purchase of plant, machinery and equipment, with an expenditure of 6,252.5 million euro (61.7% of the total

Trend in the gross fixed capital formation for agriculture, forestry and fishing *

Years	Current Values	change on previous year	Chain-weighted values **	% on***	
	million euro	%	million euro	tot. invest.	AV agricultural
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	10,110	12.6	9,767	3.1	29.2
2019	**10,140**	**0.3**	**9,747**	**3.1**	**29.6**

* As of 23 September 2019, the national accounts time series have undergone a general revision, so the data reported here may differ from those in previous versions of the booklet.
** Chain-weighted values, base year 2015.
*** Incidence chain-weighted volumes; AV agriculture at basic prices.
Source: ISTAT.

Types of investment in agriculture, forestry and fisheries*

Year	Rural buildings million euro	change on previous year (%)	Plant and machinery and armaments million euro	change on previous year (%)	Cultivated organic resources million euro	change on previous year (%)	Intellec-tual property products million euro	change on previous year (%)
2015	1,951	-	4,563	-	608	-	85	-
2016	2,118	8.5	4,938	8.2	616	1.3	73	- 14.6
2017	2,699	27.4	5,602	13.4	633	2.7	46	- 36.8
2018	3,157	17.0	6,262	11.8	632	- 0.1	60	29.1
2019	3,189	1.0	6,253	- 0.1	638	1.0	60	1.3
% of total investments	**31,5**	**-**	**61.7**	**-**	**6.3**	**-**	**0.6**	**-**

* Current values

Source: Elaborations on ISTAT data.

Gross fixed capital formation: characteristic ratios for major sectors, 2019*

	Agriculture, Forestry and Fisheries	Manufacturing Industry	Construction	Services[1]	Total economic activities
Investments per work unit					
euro	7,994	29,376	4,562	12,315	13,380
% change 2019/18	0.3	45.9	2.2	2.7	2.2
Net capital stock per labour unit[2]					
euro	121,987	144,440	39,697	285,637	250,251
% change 2019/18	-0.1	2.4	0.8	0.3	0.5

* Current values

[1] Gross of housing investment.

[2] Net of depreciation.

Source: ISTAT.

investments). The value of investments in this aggregate compared to the previous year remains almost constant, with a change of -0.1%. Positive changes, although not particularly evident (about one percentage point), were found for all other types of investment.
Investments expressed in work units amounted to 7,994 euros in 2019, remaining almost constant compared to the previous year. This value is about half of that reported for the same ratio for the entire economy (13,380 euros). The manufacturing industry allocates to new investments an expenditure, expressed in work units, of 29,376 euros, a sharp increase compared to 2018 (45.6%), showing a decidedly higher propensity to capitalisation compared to the agricultural sector.
Finally, if we look at the ratio of the capital stock (net of depreciation) per labour unit, even less encouraging trends emerge for the agricultural sector, showing a negative change in 2019 compared to the previous year, contrary to what happens in all other productive sectors.

Bank loan outstanding balances fell from 41,224 million euro at the end of 2018 to 39,944 million euro in December 2019, decelerating at a rate of 3.1% (-3.9% in 2018). A reduction in the financial supply by banks to the agricultural sector is also confirmed by other indicators. In 2019, the ratio of loans to value of production falls from 69.6% in the previous year to 64.9%, while the ratio of loans to added value falls from 124.7 to 115.5%. A lower offer of bank credit was however shared by the total of the productive branches, leaving the incidence of loans destined to agriculture on the rest of the economy more or less unchanged (equal to 5.7%).

The districts of the Centre and the Islands recorded the highest percentages of contraction in credit disbursed, -5.8% and -6.3% respectively. The North-West and North-East also saw a reduction in bank loans, although to a lesser extent, by 3.7% and 1.8% respectively; while the South remained at the same levels as the previous year (+0.3%).

Negative signals also arrive on the front of medium and long-term loans, which show a contraction of 4.9% during the year analyzed (-1.4% in 2018), so the ratio between this type and the total loans granted to agriculture drops from 28 to 27%. The reduction in absolute terms of the medium-long term debt concerned above all the destinations for construction and rural buildings and for the purchase of machinery and tools, whose values on an annual basis

Bank loans to agriculture, forestry and fisheries - December 2019

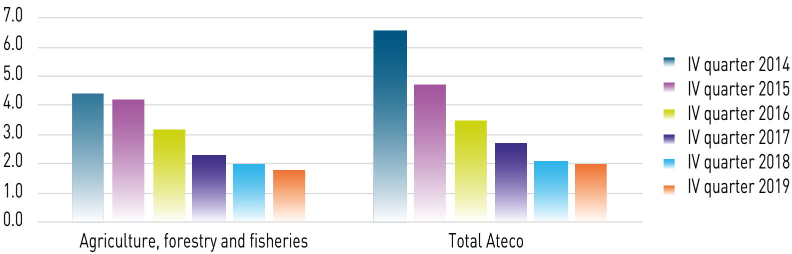
	Agriculture (million euro)	changes % previous year	% on total funding agriculture	% of total funding by industry	% of the value of agricultural output[1]	% of agricultural added value[2]
North-West	11,130	-3.7	27.9	4.2	85.4	172.9
North-East	14,529	-1.8	36.4	7.6	84.1	159.9
Centre	7,117	-5.8	17.8	4.8	76.4	125.2
South	4,728	0.3	11.8	6.6	32.2	53.8
Islands	2,439	-6.3	6.1	8.6	33.5	53.3
Total	39,944	-3.1	100.0	5.7	64.9	115.5

[1]Output at basic prices of agriculture, forestry and fisheries expressed in current values.

[2]Value added by agriculture, forestry and fisheries in current values.

Source: our calculations based on Bank of Italy and ISTAT data.

Annual loan deterioration rate – adjusted default: used



Source: Bank of Italy.

Loans beyond short term to agriculture, stocks December 2019

Description	Italy (million euro)	2018/2019 (%)
Purchase of rural properties	2,849	2.8
Purchase of machinery and equipment	4,145	-5.5
Construction of rural buildings	3,896	-9.2
Total	**10,890**	**-4.9**
North-West	3,043	-4.0
North-East	3,542	-6.2
Centre	2,049	-7.4
South	1,594	1.6
Islands	663	-7.8

Source: Bank of Italy.

contracted respectively by 9.2 and 5.5%, which is counterbalanced by the type of other rural real estate, which increases in value by 2.8%. The territorial structure of long-term financing sees the regions of Northern Italy consistently in the lead, holding 61% of the national amounts. Year-on-year trends are still down for all constituencies except for the South, which instead shows a 1.6% recovery over 2018. Farm credit quality was slightly improved, continuing a long-term trend of reducing the flow of impaired loans. The deterioration rate, i.e., the number of new loans entering non-performing status relative to the existing stock of loans at the beginning of the period, increased from 2% at the end of 2018 to 1.8% in the same quarter of 2019.

ECONOMIC RESULTS OF FARMS

PRODUCTION AND INCOME

In 2018, FADN farms record an average of 67,619 euro in total revenues, corresponding to 26,451 euro in net farm income, the share of revenues that remains available to the entrepreneur and his family once the explicit business costs are subtracted, representing 39% of business revenues. In the northern regions, characterized by the presence of intensive farms and large livestock farms, the economic performance is higher. The values recorded in the southern farms are decidedly lower, however, the share of the average income out of the farm revenues is higher than the national average, except in Puglia.

Nationally, current costs account for 40% of revenues earned, with distributed income (wages, social security charges and rent expenses) accounting for 15.5% and deferred costs (depreciation, amortization and provisions) for 8%. Naturally, different regional production vocations are reflected in the territorial differences in the achieved results.

Structural data and key economic performance by district, 2018 farm averages

	UAA	ALU	LU	FLU	Farm revenues	Operating costs	Multi-year costs	Distributed income	Non-core business	Net income
	ha	no.			euro					
Piemonte	21.6	18.2	1.5	1.3	95,869	44,487	6,066	10,333	3,842	38,824
Valle d'Aosta	42.3	22.2	1.8	1.4	65,740	27,758	10,536	11,550	14,400	30,296
Lombardy	24.4	60.0	1.5	1.3	140,130	68,959	5,714	15,633	-1,061	48,764
Liguria	4.4	2.3	1.2	1.1	48,738	17,411	4,978	6,807	30	19,573
South Tyrol	8.6	8.2	1.7	1.2	93,791	26,903	10,711	13,420	-486	42,272
Trentino	6.1	6.5	1.2	1.0	64,646	16,362	5,805	7,193	7,321	42,608
Veneto	13.5	24.1	1.4	1.2	93,456	37,717	7,524	10,527	1,494	39,182
Friuli Venezia Giulia	16.8	21.5	1.4	1.2	98,714	40,329	8,341	11,164	2,383	41,263
Emilia-Romagna	23.8	13.5	1.5	1.1	105,085	46,657	6,360	16,267	460	36,260
Tuscany	22.6	5.2	1.8	1.3	89,630	36,672	8,763	19,127	847	25,914
Umbria	23.1	13.1	1.2	0.9	62,788	25,520	5,532	10,548	4,193	25,381
Marche	23.0	8.7	1.2	1.1	51,669	21,430	4,777	7,529	1,137	19,070
Lazio	19.9	9.8	1.5	1.0	61,037	21,182	7,188	12,202	2,980	23,445
Abruzzo	13.0	5.6	1.3	1.1	38,321	13,303	3,676	6,114	659	15,887
Molise	19.9	9.8	1.2	1.0	41,260	15,482	3,303	6,527	2,377	18,326
Campania	12.1	10.2	1.2	0.9	47,855	17,187	4,180	7,129	1,502	20,861
Puglia	14.5	2.4	1.3	0.7	48,418	17,342	3,878	9,907	640	17,930
Basilicata	29.7	7.3	1.6	1.1	56,103	18,765	4,540	9,935	1,515	24,378
Calabria	9.4	2.5	1.4	0.9	27,883	7,872	3,573	7,835	2,534	11,135
Sicily	17.8	5.4	1.1	0.7	41,925	13,248	4,091	8,349	1,031	17,269
Sardinia	39.1	17.6	1.1	1.0	45,695	18,365	4,400	6,217	3,842	20,556
Italy	**18.4**	**12.9**	**1.3**	**1.0**	**67,619**	**26,879**	**5,432**	**10,454**	**1,597**	**26,451**

Source: RICA.

Structural and economic indicators by district, 2018

	REVENUES/ HA	REVENUES/ ALU	REVENUES/ LU	REVENUES/ FLU	NR/ REVENUES (%)	NR/HA	NR/ALU
Piemonte	4,432	5,266	65,024	30,104	40	1,795	2,133
Valle d'Aosta	1,554	2,958	37,451	22,029	46	716	1,363
Lombardy	5,751	2,337	96,510	37,980	35	2,001	813
Liguria	10,956	21,481	39,090	18,252	40	4,400	8,627
South Tyrol	10,876	11,490	56,537	35,549	45	4,902	5,179
Trentino	10,652	10,012	55,297	41,995	66	7,020	6,599
Veneto	6,899	3,876	69,079	33,965	42	2,892	1,625
Friuli Venezia Giulia	5,865	4,590	68,641	34,226	42	2,451	1,919
Emilia-Romagna	4,408	7,788	69,775	32,181	35	1,521	2,687
Tuscany	3,973	17,092	49,566	20,237	29	1,149	4,942
Umbria	2,723	4,784	50,984	27,720	40	1,101	1,934
Marche	2,243	5,949	42,644	17,145	37	828	2,196
Lazio	3,060	6,233	41,062	22,692	38	1,175	2,394
Abruzzo	2,944	6,866	30,534	14,003	41	1,220	2,847
Molise	2,074	4,214	33,276	17,573	44	921	1,872
Campania	3,962	4,685	39,715	23,027	44	1,727	2,042
Puglia	3,348	20,156	38,528	24,717	37	1,240	7,464
Basilicata	1,892	7,693	35,102	22,877	43	822	3,343
Calabria	2,966	10,956	20,281	11,938	40	1,184	4,376
Sicily	2,357	7,767	37,796	23,199	41	971	3,199
Sardinia	1,170	2,590	41,020	20,936	45	526	1,165
Italy	**3,674**	**5,238**	**50,304**	**26,038**	**39**	**1,437**	**2,049**

Source: RICA.

Structural data and key financial results by TF, 2018 farm averages

		UAA ha	ALU	LU	FLU	Farm revenues	Operating costs	Multi-year costs	Distributed income	Non-core business	Net income
		ha	no.			euro					
Plant TF	Grains	28.3	0.2	1.0	0.9	50,700	23,692	4,351	7,331	272	15,598
	Horticultural	3.4	0.3	2.3	1.3	106,871	45,053	5,658	20,822	-1,581	33,757
	Fruit	8.4	0.0	1.5	0.9	59,845	17,296	4,850	12,197	1,162	26,664
	Wine	8.5	0.1	1.2	0.9	62,238	18,876	5,394	9,673	2,056	30,350
	Olives	11.2	0.1	1.1	0.8	28,263	9,002	3,614	7,142	2,623	11,129
Livestock TF	Dairy Cattle	30.9	67.2	1.8	1.5	175,945	77,832	12,050	15,795	4,150	74,417
	Sheep and goats	42.9	27.4	1.3	1.2	47,947	17,547	5,330	6,532	4,063	22,601
	Mixed Cattle	33.7	37.4	1.2	1.1	69,467	34,963	6,426	7,620	3,432	23,890
	Granivores	19.5	368.4	2.3	1.6	317,322	190,700	12,270	26,631	-1,916	85,806
	Polybreeding	20.5	43.4	1.2	1.1	82,199	45,790	6,382	10,791	-1,958	17,279
Mixed: crops and livestock		21.9	13.9	1.4	1.2	60,482	25,947	5,316	8,606	1,794	22,406

Source: RICA.

Structural and economic indicators by TF, 2018

		REVENUES/ HA	REVENUES/ ALU	REVENUES/ LU	NR/FLU	NR/REVENUES (%)	NR/HA	NR/ALU
Plant TF	Grains	1,792	318,233	52,264	17,110	31	551	97,906
	Horticultural	31,214	387,402	46,773	25,315	32	9,859	122,368
	Fruit	7,130	1,447,612	40,614	29,043	45	3,177	644,981
	Wine	7,340	526,426	49,870	32,706	49	3,579	256,710
	Olives	2,528	550,132	24,782	13,922	39	995	216,611
Livestock TF	Dairy Cattle	5,695	2,619	96,138	48,826	42	2,409	1,108
	Sheep and goats	1,117	1,750	36,972	19,078	47	527	825
	Mixed Cattle	2,059	1,856	56,298	20,898	34	708	638
	Granivores	16,247	861	135,248	52,118	27	4,393	233
	Polybreeding	4,019	1,895	66,242	15,995	21	845	398
	Mixed: crops and livestock	2,764	4,351	44,004	18,466	37	1,024	1,612

Source: RICA.

PLANT PRODUCTION ORIENTATIONS

Among the main productive crop orientations, specialised horticulture stands out for the high productive and income values obtained, with farms that are characterised by very small areas but by a high use of labour. On the contrary, farms specialised in grain cultivation, typically with a large surface area and a limited need for labour, have a much lower economic performance than horticultural farms. Farms producing fruit and wine generate better remuneration for family labour and are more efficient in terms of income on revenues. Olive farms, on the other hand, have the lowest labour productivity and profitability.

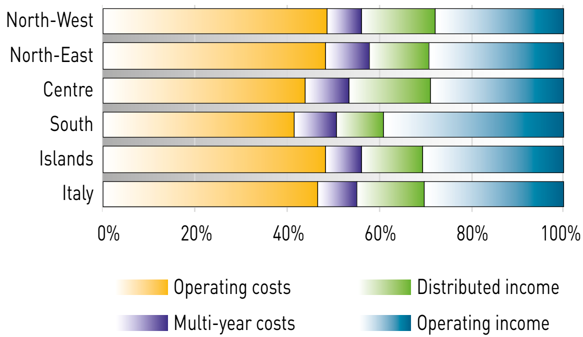
Structural and economic data by district, grain crop TF: 2018

	UAA	LU	Revenues/ha	Revenues/LU	NR/FLU
	ha	no.	euro		
North-West	33.3	1.3	2,485	63,368	19,094
North-East	20.4	0.8	1,956	49,343	13,306
Centre	30.5	1.1	1,460	42,106	13,680
South	27.9	0.8	1,244	44,360	20,633
Islands	44.3	0.8	1,103	58,033	22,465

Structural and economic data by district, horticultural TF: 2018

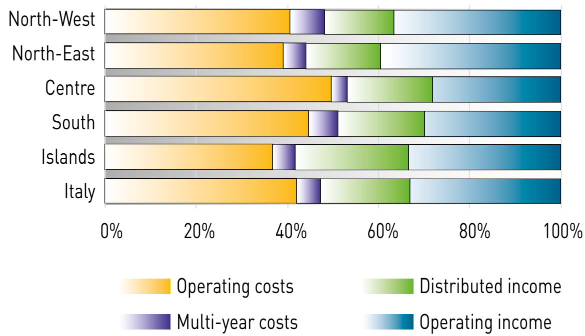
	UAA	LU	Revenues/ha	Revenues/LU	NR/FLU
	ha	no.	euro		
North-West	1.9	1.3	27,636	40,064	16,543
North-East	5.8	2.7	24,614	53,551	27,559
Centre	2.6	2.3	49,177	55,214	23,205
South	3.7	2.7	28,426	39,298	21,411
Islands	4.5	3.0	30,874	46,488	41,059

Specialist grain farms: % composition of farm revenues, 2018



Source: RICA.

Specialist horticultural farms: % composition of farm revenues, 2018

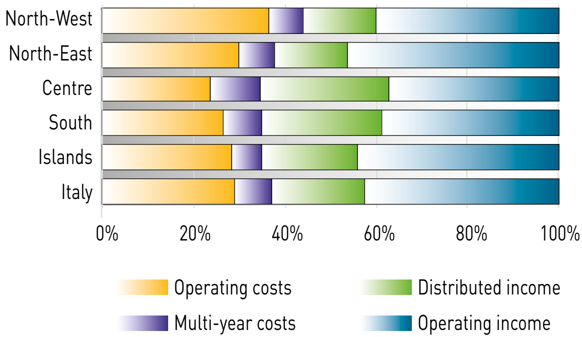


Source: RICA.

Structural and economic data by district, fruit TF: 2018

	UAA	LU	Revenues/ha	Revenues/LU	NR/FLU
	ha	no.	euro		
North-West	7.7	1.4	8,857	47,892	26,670
North-East	7.6	1.6	12,460	57,940	41,256
Centre	10.8	2.1	6,332	32,190	26,443
South	7.4	1.4	5,200	27,778	21,344
Islands	9.7	1.1	4,607	39,320	24,029

Specialist fruit farms: % composition of farm revenues, 2018

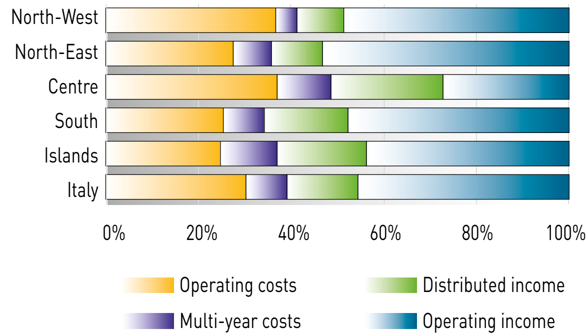


Source: RICA.

Structural and economic data by district, wine TF: 2018

	UAA	LU	Revenues/ha	Revenues/LU	NR/FLU
	ha	no.	euro		
North-West	9.2	1.7	12,164	67,621	45,877
North-East	6.9	1.3	11,256	60,809	40,792
Centre	15.4	1.9	6,568	53,342	26,037
South	6.6	1.0	5,791	36,428	24,874
Islands	9.1	0.9	3,385	32,808	21,983

Specialist wine farms: % composition of farm revenues, 2018

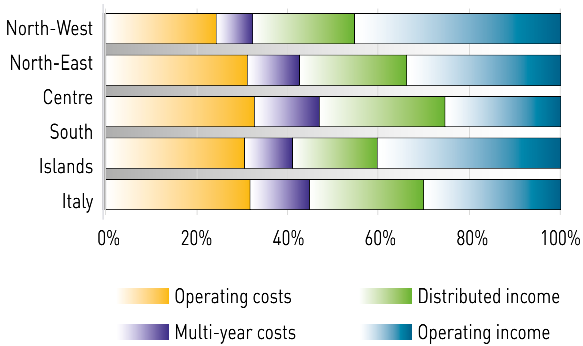


Source: RICA.

Structural and economic data by district, olive TF: 2018

	UAA	LU	Revenues/ha	Revenues/LU	NR/FLU
	ha	no.	euro		
North-West	6.0	1.3	7,572	34,369	20,950
Centre	12.4	1.3	3,795	36,818	19,445
South	10.7	1.2	2,280	20,781	11,392
Islands	12.5	0.9	2,174	31,946	20,078

Specialist olive farms: % composition of farm revenues, 2018



Source: RICA.

LIVESTOCK PRODUCTION TRENDS

Large and intensive farms specialising in granivores (average of 368 ALU per farm) achieve, on average, higher financial results than others in livestock sectors. Farms specialising in dairy cattle also show excellent economic performance, albeit decidedly lower than those for granivores. Mixed dairy farms, which are generally more extensive (herd density is on average 1.1 ALU/UAA compared to 2.2 ALU/UAA for dairy farms) show modest results. The sheep and goat sector, characterized by extensive breeding located mainly in the Centre-South, especially in Sardinia, records the lowest economic values, but can recover the disadvantage in terms of income on the turnover. The farms translate into income 47% of revenues, against 27% of those with granivores.

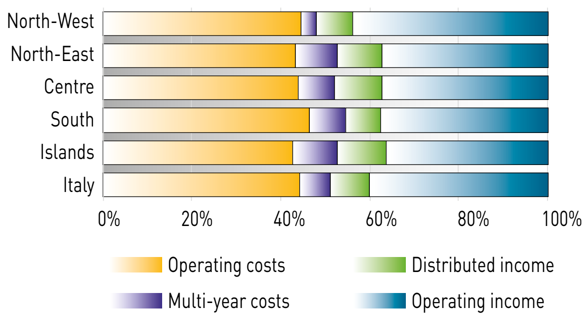
Structural and economic data by district, dairy cattle TF: 2018

	UAA	ALU	LU	Revenues/HA	Revenues/ALU	Revenues/LU	NR/FLU
	ha	no.		euro			
North-West	49.5	101.5	2.0	5,762	2,810	141,022	74,167
North-East	23.9	48.0	1.7	5,989	2,977	82,476	40,500
Centre	35.7	64.1	2.1	4,522	2,518	75,209	42,736
South	19.2	69.6	1.7	6,703	1,853	75,510	34,541
Islands	54.6	74.2	1.9	2,621	1,927	75,673	42,133

Structural and economic data by district, granivore TF: 2018

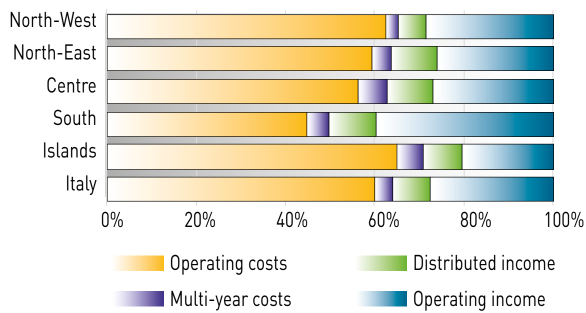
	UAA	ALU	LU	Revenues/HA	Revenues/ALU	Revenues/LU	NR/FLU
	ha	n.		euro			
North-West	23.8	510.0	2.3	17,914	835	182,928	60,076
North-East	17.3	426.8	2.9	21,538	875	130,374	56,590
Centre	19.1	236.7	1.8	8,961	724	94,779	36,054
South	12.1	128.7	2.0	10,156	957	61,654	34,368
Islands	22.8	83.9	1.5	5,979	1,623	88,113	26,292

Specialist dairy cattle farms: % composition of farm revenues, 2018



Source: RICA.

Specialist granivore farms: % composition of farm revenues, 2018

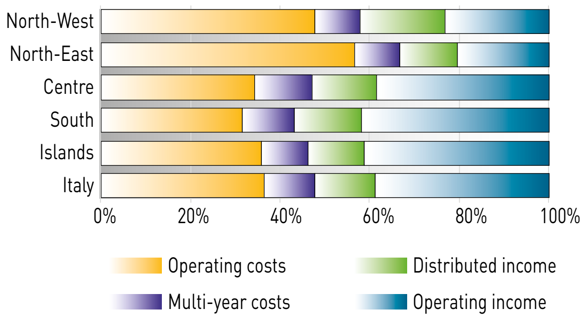


Source: RICA.

Structural and economic data by district, sheep and goat TF: 2018

	UAA	ALU	LU	Revenues/ HA	Revenues/ ALU	Revenues/ LU	NR/ FLU
	ha	n.		euro			
North-West	22.3	14.9	1.5	1,468	2,202	21,645	6,791
North-East	21.8	14.3	1.4	2,815	4,292	44,927	14,079
Centre	39.1	32.0	1.5	1,594	1,948	41,939	22,602
South	33.0	21.6	1.4	1,071	1,638	25,477	13,220
Islands	53.8	31.7	1.2	933	1,580	43,307	24,068

Specialist sheep and goat farms: % composition of farm revenues, 2018

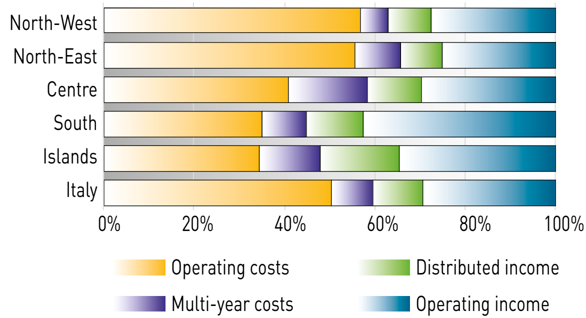


Source: RICA.

Structural and economic data by district, mixed cattle TF: 2018

	UAA	ALU	LU	Revenues/ HA	Revenues/ ALU	Revenues/ LU	NR/ FLU
	ha	n.		euro			
North-West	25.6	48.2	1.3	3,709	1,972	71,649	23,372
North-East	23.8	45.3	1.3	4,943	2,598	89,237	27,361
Centre	26.8	25.4	1.2	1,728	1,823	38,305	16,240
South	35.5	28.0	1.2	1,138	1,442	33,733	17,650
Islands	54.1	30.5	1.1	672	1,190	33,410	17,076

Specialist mixed cattle farms: % composition of farm revenues, 2018

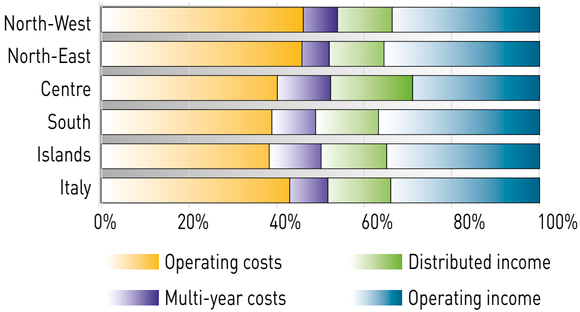


Source: RICA.

Structural and economic data by district, mixed farms with crops and livestock TF: 2018

	UAA	ALU	LU	Revenues/ HA	Revenues/ ALU	Revenues/ LU	NR/ FLU
	ha	n.		euro			
North-West	21.1	13.3	1.2	3,234	5,161	54,900	20,540
North-East	22.3	24.7	1.7	5,145	4,643	68,513	28,894
Centre	21.4	11.3	1.4	2,510	4,776	38,643	14,705
South	18.2	10.2	1.3	1,965	3,489	26,626	12,662
Islands	36.6	13.3	1.1	1,199	3,292	38,236	20,033

Mixed farms with crops and livestock: % composition of farm revenues, 2018



Source: RICA.

The economic performance of farms in the different EU countries can be compared through FADN data, taking into account the large differences between the various farms in terms of production factors and agro-climatic settings.
Below we compare, for each production specialisation, the Italian results with those of other EU countries achieved in the three-year period 2016-2018 .
Italian farms achieve good economic results in both the livestock and plant sectors. In the livestock sector, the productivity and profitability of land, livestock unit and labour factors are in line with those achieved by countries with the most advanced agriculture. In plant systems, the reduced structural assets of national farms, in terms of surface area and labour units, limits the average farm results in general, but it nonetheless does not penalise the productivity and profitability of the land and labour factors.
The national farms specialising in dairy cattle breeding, characterised by typically intensive farms
(2.5 ALU/ha against 1.5 ALU/UAA in the EU), have the highest profitability of the land and livestock unit factors. They are still behind Denmark for profitability of family labour and the Netherlands for land productivity.
Also in the mixed cattle sector, Italy ranks first for profitability of family labour and livestock units, and it achieves above average values for the productivity of the factors considered.
Community farms specialising in the rearing of granivores stand out for the large size of their herds (on average 361 ALUs), which are generally intensively reared, leading to higher economic results than other types of livestock farming. Italy achieves excellent production and income performance in this sector too, well above the EU average, with the exception of the productivity of ALUs.
Farms specialising in sheep and goat rearing, which are generally extensive (EU average stocking density is 0.8 ALU/ha), achieve lower economic results on average than other livestock sectors. Also in this case, Italian farms register above average values and obtain the best index for profitability of livestock units.
Among plant crop sectors, Italian grain farms, although small in size (31 hectares compared to the EU average of 65), rank first and third respectively for profitability and land productivity.
Horticulture farms, with small average areas (7 ha EU average, 6 ha in Italy), achieve high economic results. The Neth-

[1] *For livestock systems, countries with a share of ALUs greater than 1% of the ALUs raised by the total number of European farms specialised in the sector were considered. For plant systems, countries with a share of UAA greater than 1% of the UAA managed by the total number of European farms specialised in the sector were considered.*

erlands is the leading country for productivity of the land and labour factors and for profitability of family labour. Italy also achieved good results on factor profitability.

In fruit growing, Italian farms show above average values for productivity and factor profitability. The UK, on the other hand, ranks first for labour productivity and profitability.

In the wine sector, French farms are the best performers in terms of productivity and labour profitability, while German farms are first in relation to the land factor. Italian farms also performed well, recording values above the European average.

In olive-growing, Italy holds first place for land productivity and profitability, while Spain holds first place for productivity and profitability of labour.

Specialist dairy cattle farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	GP/ALU	GP/LU	NR/HA	NR/ALU	NR/FLU
Austria	3,154	2,513	49,096	1,041	830	16,556
Belgium	4,340	1,920	135,234	1,196	529	38,565
Bulgaria	1,766	977	13,278	881	487	9,863
Denmark	5,521	3,331	292,549	450	272	65,744
Finland	2,754	3,380	94,384	427	524	18,013
France	2,194	1,868	109,867	386	329	22,380
Germany	3,465	2,340	128,998	725	489	38,279
Ireland	3,319	1,561	126,599	1,209	569	55,328
Italy	**6,256**	**2,532**	**112,038**	**2,690**	**1,089**	**58,535**
Holland	7,112	2,869	214,065	1,150	464	41,209
Poland	1,800	1,480	22,451	811	667	10,427
UK	3,879	2,026	164,117	591	309	43,167
Romania	1,916	1,717	9,763	1,141	1,022	6,071
Spain	5,376	2,120	91,690	1,517	598	33,841
Sweden	3,028	3,245	175,620	337	361	31,046
EU 28	3,197	2,176	72,347	795	541	21,741

Specialist mixed cattle farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	GP/ALU	GP/LU	NR/HA	NR/ALU	NR/FLU
Austria	1,741	1,932	36,833	522	580	11,318
Belgium	2,315	1,139	80,867	539	265	19,164
Czechoslovakia	475	986	23,458	209	435	20,517
France	923	835	70,584	203	184	16,824
Germany	1,771	1,532	85,819	288	250	16,460
Greece	1,838	552	20,809	1,257	377	17,148
Ireland	902	756	35,920	359	301	14,704
Italy	**2,021**	**1,469**	**62,314**	**1,019**	**741**	**34,494**
Holland	6,933	1,191	117,594	773	133	14,455
Poland	766	855	9,475	328	366	4,107
Portugal	434	707	15,673	338	550	13,529
UK	1,085	967	79,618	142	126	12,347
Romania	1,454	1,133	8,951	837	652	5,402
Spain	831	967	43,135	396	461	23,575
Sweden	1,333	2,292	99,882	141	242	11,917
EU 28	1,126	1,061	45,737	331	312	14,898

Source: calculations based on FADN-EU data, European Commission, DG AGRI.

Specialist granivore farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	GP/ALU	GP/LU	NR/HA	NR/ALU	NR/FLU
Austria	6,704	1,964	140,066	1,714	502	37,502
Belgium	27,059	1,139	425,493	5,174	218	85,135
Bulgaria	21,050	1,257	54,871	4,328	258	68,045
Denmark	7,802	1,460	349,426	558	104	98,524
France	8,660	1,001	215,640	970	112	33,965
Germany	6,210	1,527	218,232	825	203	44,468
Italy	**18,640**	**754**	**194,172**	**7,298**	**295**	**111,454**
Holland	110,954	1,349	446,780	14,058	171	89,953
Poland	5,226	1,238	80,901	1,133	268	26,133
UK	13,594	1,021	225,425	1,331	100	67,767
Romania	13,337	1,235	38,081	3,552	329	25,397
Spain	10,609	661	138,878	3,176	198	72,170
Sweden	4,717	1,109	211,832	420	99	34,680
Hungary	16,240	1,418	93,177	1,932	169	39,315
EU 28	**9,838**	**1,084**	**166,417**	**1,709**	**188**	**51,636**

Specialist sheep and goat farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	GP/ALU	GP/LU	NR/HA	NR/ALU	NR/FLU
Bulgaria	955	730	6,808	710	543	6,877
France	1,113	1,722	61,371	311	481	18,980
Germany	1,397	2,392	65,917	410	702	26,471
Greece	1,823	1,128	22,584	1,021	632	15,056
Ireland	463	634	23,347	207	284	10,683
Italy	**1,035**	**1,569**	**39,475**	**608**	**921**	**25,267**
Portugal	374	728	9,902	338	658	10,090
UK	420	776	70,745	107	197	21,741
Romania	1,725	1,095	13,341	718	456	5,978
Spain	1,034	1,336	50,668	461	595	28,926
EU 28	**895**	**1,187**	**29,594**	**363**	**482**	**13,814**

Source: calculations based on FADN-EU data, European Commission, DG AGRI.

Specialist grain farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	GP/LU	NR/HA	NR/FLU
Bulgaria	742	39,472	108	33,110
Czechoslovakia	1,045	66,747	160	25,806
Denmark	2,037	173,171	-96	-13,493
Finland	665	75,312	133	15,716
France	1,088	101,670	106	11,063
Germany	1,229	115,176	153	22,190
Italy	**1,291**	**40,944**	**622**	**21,029**
Latvia	651	50,113	115	16,438
Lithuania	650	33,974	162	10,980
Poland	817	17,154	250	5,726
UK	1,368	145,578	285	48,276
Romania	751	29,504	309	16,968
Slovakia	987	63,295	66	30,719
Spain	578	41,479	260	20,921
Sweden	1,200	127,761	56	8,117
Hungary	1,049	59,798	377	43,667
EU 28	962	49,591	229	15,553

Specialist horticulture and floriculture farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	GP/LU	NR/HA	NR/FLU
Belgium	59,175	120,416	16,761	97,374
Bulgaria	11,854	10,601	1,803	4,083
Denmark	44,140	122,984	3,044	80,850
Finland	36,472	92,644	3,691	32,473
France	27,854	72,198	5,364	38,465
Germany	47,433	72,131	7,437	44,685
Greece	20,769	26,231	7,380	18,042
Italy	**30,510**	**65,571**	**13,336**	**55,813**
Holland	94,845	148,271	15,287	123,174
Poland	11,159	21,550	3,000	9,768
Portugal	9,563	21,810	3,771	11,862
UK	48,023	72,588	3,770	47,035
Romania	6,923	7,105	1,797	2,114
Spain	22,346	49,452	8,541	52,948
Hungary	10,689	35,342	3,208	34,582
EU 28	31,353	61,785	7,376	36,391

Source: calculations based on FADN-EU data, European Commission, DG AGRI.

Specialist fruit farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	PL/ULT	RN/HA	RN/ULF
France	8,259	50,533	1,813	32,568
Germany	9,978	55,056	1,782	26,103
Greece	5,038	21,410	2,390	13,474
Italy	**6,851**	**41,169**	**3,397**	**30,312**
Poland	2,507	11,402	686	4,321
Portugal	5,484	20,755	2,651	20,242
UK	9,681	62,330	761	45,089
Romania	3,162	9,990	1,597	6,147
Spain	3,400	39,823	1,643	39,244
Hungary	2,525	20,713	1,240	25,978
EU 28	4,703	30,834	1,866	20,811

Specialist winegrowing farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	PL/ULT	RN/HA	RN/ULF
Austria	6,139	51,381	1,802	19,499
France	9,580	87,687	2,502	48,190
Germany	12,279	64,732	4,483	36,186
Greece	3,244	20,216	1,595	12,421
Italy	**7,750**	**56,836**	**4,073**	**40,156**
Portugal	4,915	28,215	2,155	19,737
Romania	3,322	13,481	1,219	9,585
Spain	1,926	31,796	1,087	26,795
Hungary	5,421	27,078	1,710	24,998
EU 28	6,424	56,689	2,424	35,005

Specialist olive farms: average farm results in euro (2016-2018 three-year period)

	GP/HA	PL/ULT	RN/HA	RN/ULF
Greece	2,160	14,431	1,179	9,576
Italy	**2,355**	**25,661**	**1,459**	**22,644**
Portugal	842	23,393	455	23,024
Spain	1,923	39,617	1,175	43,022
EU 28	2,028	27,467	1,200	23,706

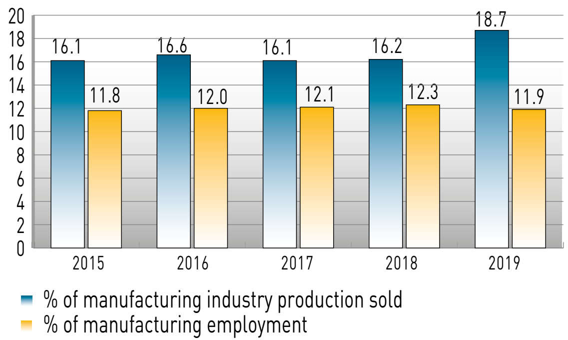
Source: calculations based on FADN-EU data, European Commission, DG AGRI.

FOOD INDUSTRY

PRODUCTION

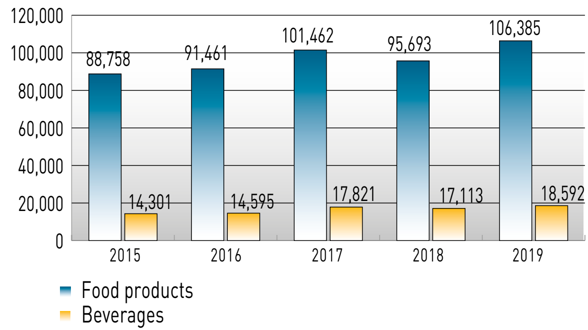
The food, beverage and tobacco industry plays a key role in the national manufacturing sector. In 2019, it represented around 19% of the value of production and 12% of employment. Compared to 2018, the number of employees decreased by about 3% to around 471 thousand, while the value of production saw an increase of over 10%, reaching 125 billion euro. The value of production of food, which accounts for about 85% of the sector, increased by 11.2%, confirming the growth trend of the last five years after the setback of 2018. This positive performance is attributable to all sectors except for the production of vegetable and animal oils and fats (-22%) and for the production of animal feed products (-18%). Among the growing sectors, there is a 34% increase in the value of production of meat processing and preservation and a 26% increase in the value of production of bakery and flour products. The value of production in the beverage industry increased by 9% compared to 2018. Among the leading sectors of the beverage industry, the +7% increase in the value of wine production and +8% in the value of soft drinks are noteworthy.

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



Source: ISTAT, Industry and National Accounting.

Dynamics of production sold (million euro)



Source: ISTAT. Industry.

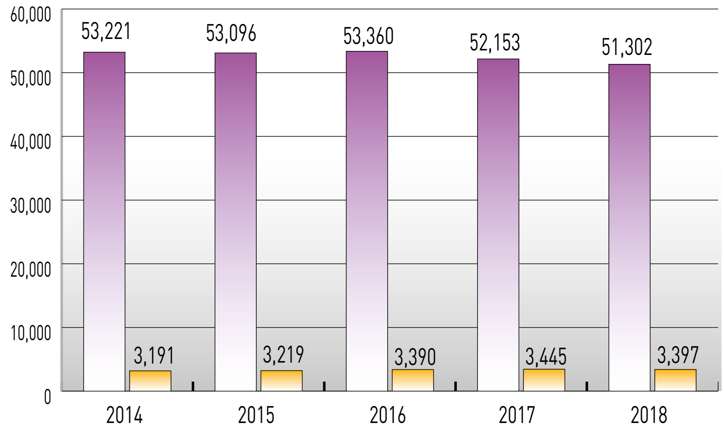
Production sold of the food and beverage industry, 2019

	Production sold (million euro)	Share of total %	% change 2019/2018
Food products	**106,385**	**85.1**	**11.2**
Processing and preservation of meat and production of meat products	29,144	23.3	33.9
Processing and preservation of fish, crustaceans and molluscs	nd	1.3*	nd
Processing and storage of fruit and vegetables	10,072	8.1	-0.1
Production of vegetable and animal oils and fats	4,791	3.8	-21.7
Dairy industry	16,185	13.0	8.1
Grain processing, production of starches and starch products	4,942	4.0	-4.1
Production of bakery and flour products	17,359	13.9	26.1
Other food products	16,261	13.0	5.4
Animal feed products	5,536	4.4	-17.6
Tobacco	8	0.0	76.7
Beverages	**18,592**	**14.9**	**8.6**
Distillation, correction and blending of spirits	1,977	1.6	45.3
Production of wines from grapes	8,801	7.0	7.2
Production of cider	28	0.0	-46.3
Production of other non-distilled fermented beverages	161	0.1	-6.9
Beer	2,128	1.7	-4.5
Soft drinks and mineral water	5,496	4.4	8.1
Total food and beverages	**124.978**	**100,0**	**10,8**

*2018
Source: ISTAT. Industry.

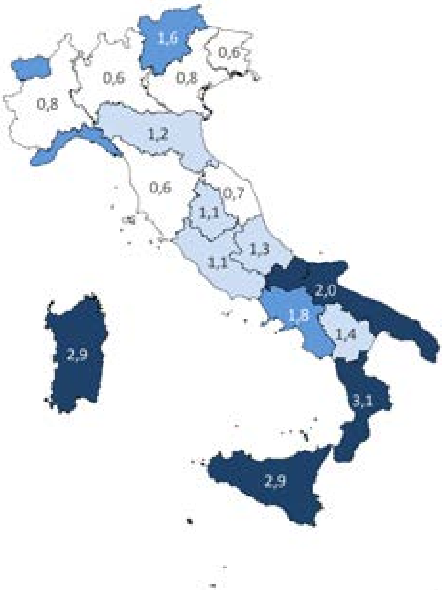
Based on the latest available data for 2018, businesses in the food and beverage industry account for 14.5% of businesses in the manufacturing sector. They fell by 1.6% compared to the previous year. In particular, food companies decreased in line with the industry average, while beverage companies decreased by 1.4%.
Looking at the regional distribution of food and beverage companies, 37.4% are located in northern regions, 30% in southern regions and about 16% in the Islands. Lombardy (10.3%), Campania (10.3%) and Sicily (12.6%) are the regions with the highest percentage of companies in the sector. The index of specialisation, measured at the regional level through the employee share of the entire manufacturing sector, shows greater specialisation in the Southern regions compared to those of the North.

Number of active companies



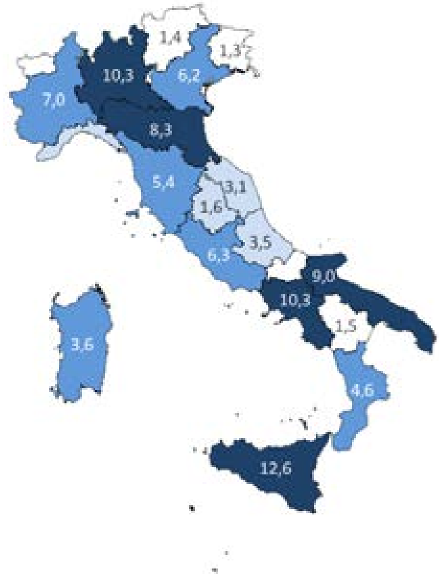
Source: ISTAT, Companies.

Food and beverage industry specialisation, 2018



Source: ISTAT.

The regional distribution of food and beverage companies (%), 2018

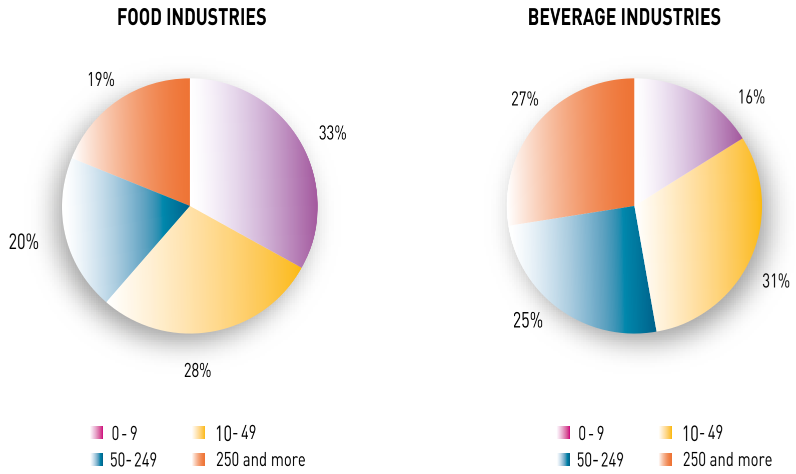


Source: ISTAT.

EMPLOYEES

Companies in this sector have an average of 8 employees per company. The average company size shows a marked regional range: it goes from a minimum of 3.7 employees per company in Calabria to a maximum of 14.1 employees in Emilia-Romagna.
33% of companies in the food industry have up to 9 employees, while the size of companies in the beverage industry is larger.

Employees by size class, 2018



Source: ISTAT.

COMPARISON WITH THE EU 28

The Italian food industry accounts for about 11% of the EU food industry added value and employs 9.2% of the workforce. Italy represents about 20% of the companies and ranks third in terms of turnover size, with a share of 11.6%, after Germany and France (18% and 17.5%). The Italian beverage sector accounts for 11.8% of turnover, 8.8% of employment, and 12% of EU 28 companies.

Main indicators of the food industry in the EU 28 countries, 2018

	Companies	Employed	Value of production	Added value*	Turnover
	(,000 units)		(million euro)		
Austria	3,470	79,738	16,764.0	4,590.4	19,512.8
Belgium	5,123	89,584	36,981.4	6,969.9	39,829.3
Bulgaria	5,312	82,477	4,477.9	951.8	5,183.7
Cyprus	834	12,693	1,332.3	369.6	1,553.0
Croatia	2,721	51,631	3,761.5	4,043.2	4,594.9
Denmark	1,465	55,275	19,945.4	1,024.2	25,984.7
Estonia	626	13,328	1,559.4	357.3	1,714.9
Finland	1,596	35,775	9,037.1	2,206.7	9,374.9
France	51,288	623,057	149,283	34,386.3	178,558.9
Germany	26,543	910,429	163,984.7	39,701.2	185,172.5
Greece	15,164	124,921	11,812.0	2,915.9	13,731.2
Ireland	1,815	49,263	22,818.9	6,993.4	24,293.9
Italy	**51,579**	**416,882**	**115,554.5**	**22,896.4**	**119,783.3**
Latvia	1,079	21,312	1,567.6	368.8	1,677.7
Lithuania	1,649	38,523	3,538.0	778.2	3,831.2

	Companies	Employed	Value of production	Added value.	Turnover
	(,000 units)		(million euro)		
Luxembourg	121	5,304	737.8	247.9	764
Malta	366	2,980	344.1	91.8	nd
Holland	6,203	127,302	65,548.2	11,077.7	70,773
Poland	18,307	435,667	53,425.5	10,837.0	55,091
Portugal	9,445	98,931	11,822.7	2,430.9	13,433
UK	8,224	392,340	89,139.6	25,837.3	97,595
Czech Rep.	8,463	100,181	10,198.1	2,319.5	11,385
Romania	9,244	164,505	8,663.7	1,481.0	9,926
Slovakia	3,425	37,976	3,209.3	711.4	3,772
Slovenia	2,361	16,555	1,801.5	498.7	2,084
Spain	24,437	377,697	99,853.6	17,753.0	101,578
Sweden	3,480	58,000	13,932.7	3,468.5	17,198
Hungary	4,479	97,544	9,595.0	2,139.0	10,382
EU 28	**265,094**	**4,519,870**	**913,597**	**n/a**	**1,026,034**

* at factor cost.

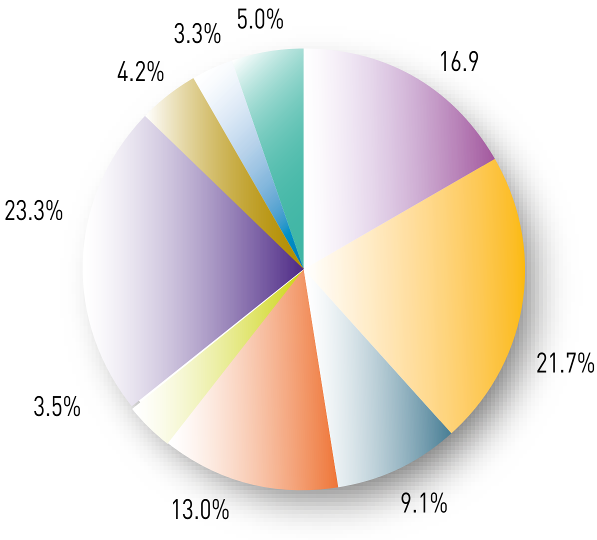
France's AV, turnover and business data are for 2017.

Source: Eurostat.

INTERNAL MARKET AND FOREIGN DEMAND

In 2019, the average monthly expenditure of Italian households was 2,560 euro in current values, comparable to 2018 (-0.4%). In real terms, spending fell by 1% if inflationary trends are taken into account (+0.6% change in the consumer price index), decreasing for the second year running.
Spending on food and non-alcoholic beverages is the second largest expenditure item (18.1%), after housing, water, electricity and other fuels. On average, 464 euro per month was spent, with no substantial difference from 462 euro in 2018. In detail, an increase in spending was recorded for vegetables (+2% compared to 2018), while the only significant negative change was in spending on fruit (-2.5% on 2018).
Also in 2019, the well-known territorial gaps in spending behaviour are evident, albeit mitigated. In the South and the Islands, where there is less money available, the items destined to satisfy basic needs, such as food, weigh more on expenditure: compared to the national average (18.1%), in the South the share rises to 23.3% and in the Islands to 21.4%, while it is 15.9% in the North-East. Another gap is found on the basis of the municipalities of residence: in the metropolitan areas a lower share of expenditure goes to food and non-alcoholic beverages (15.2%), while it rises to 19.2% in municipalities with up to 50 thousand inhabitants.
According to Ismea estimates, Italian household spending on food grew sharply in the first half of 2020 (+9.2%), following restrictions to deal with the spread of the coronavirus, which led to a collapse in non-domestic consumption in the restaurant channels. Although they all increased, the various sectors showed different levels of growth in expenditure: in particular, meat, cheese and fruit and vegetables showed above-average increases, while non-alcoholic beverages and fish products showed below-average growth.

Average monthly household expenditure on food and non-alcoholic beverages (euro), 2019



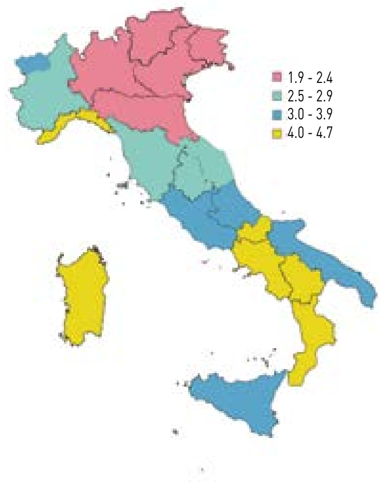
AVERAGE MONTHLY EXPENDITURE	464.3
Bread and grains	76.5
Meats	98.3
Fish and fish products	41.2
Milk, cheese and eggs	59.1
Oils and fats	15.9
Fruit and vegetables	105.6
Sugar, jams, honey, chocolate and confectionery	19.2
Coffee, tea and cocoa	14.8
Mineral water, soft drinks, fruit and vegetable juices	22.7

Source: ISTAT.

DISTRIBUTION

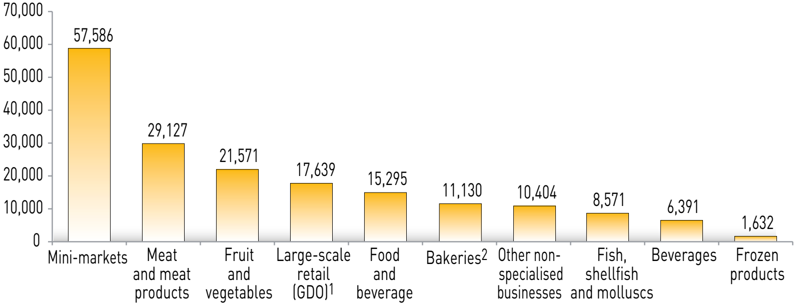
In 2019, the number of specialised and non-specialised fixed-location businesses in the food sector declined, totalling 179,346 (-1.8%).
In the specialised retail sector there was an increase in food and beverage outlets (+2.3%), against a reduction in other types of sales, especially butchers (-2.4%) and greengrocers (-1.9%).
In the non-specialised retail sector, there was a decrease in mini-markets (-2.1%), the leading type of sales outlet with over 57,500 outlets, and food and beverage stores (-4.3%).
Large-scale retail trade (GDO) also fell slightly (-0.8%). In particular, there has been an increase in the number of large-scale retail outlets, hypermarkets (+0.8%) and supermarkets (+0.6%), which have a total national footprint of 189 square metres per 1,000 inhabitants. Discount stores continue to grow throughout the country (+1.9%), with 56 square metres per 1,000 inhabitants, a figure that consolidates their competitiveness among local stores. On the other hand, the number of super-small shops is decreasing (-3.3%), i.e. shops with less than 400 square metres of floor space, typical of small towns, hills and mountains.
With regard to territorial distribution, the gap remains unchanged between the regions of the North, where hypermarkets are widespread, and those of the Centre-South, where supermarkets and smaller proximity stores are concentrated.
According to ISTAT data, in 2019 retail sales in the food sector declined slightly in volume (-0.1%) and value (-0.1%). The percentage changes in value were negative for small areas (-0.7%) and positive for large-scale distribution (+1.4%), thanks to the drive of discount stores (+4.5%).
The food retail itinerant trade contracted by 3%, with a total of 33,663 units, or 18.8% of the total itinerant businesses.
The crisis caused by the pandemic does not seem to have had an immediate impact on

Fixed-location retail food businesses per 1,000 inhabitants, 2019



Source: National Trade Observatory, MISE; ISTAT.

Fixed-location retail food businesses, 2019



[1] Including: hypermarkets, supermarkets, discount stores.

[2] Including confectionery and candy stores.

Source: National Trade Observatory, Ministry of Economic Development (MISE).

the fixed-location food distribution sector, except for the change in the purchasing habits of consumers, who during the lockdown had to buy from medium-sized supermarkets and neighbourhood stores, to the detriment of hypermarkets and shopping centres outside town centres. During the quarantine, many large-scale retail chains blocked the prices of thousands of their own-brand products and took part in actions to support the vulnerable and struggling people, in collaboration with the Civil Protection Service, municipalities and volunteer associations. Itinerant trade, on the other hand, suffered a drastic drop in turnover due to the closures and restrictions imposed by the quarantine.

According to the latest data from FIPE (Italian Federation of Public Establishments), in 2018, household spent 84,291 million euro on food services, a 1.7% increase compared to the previous year and a 5.7% compared to the period between 2008 and 2018, a period in which household spending continued to decline. The industry's turnover, estimated to increase by a total of 86 billion euro in 2019, is unfortunately a figure set to halve in 2020 due to closures imposed in the lockdown due to the Covid-19 pandemic.
Overall, in 2018, there were 336,137 businesses active in commercial food service (cafés, restaurants, taverns, pizzerias, pastry shops and ice cream parlours) and collective catering (catering and canteens); 112,441 of these, or 28.7% of the total, are run by women, while 56,606 are businesses run by young people under 35, while over 45,000 have foreign partners or owners.
The network of public food service businesses extends over the entire national territory and is linked in particular to demographic variables, with higher shares in Lombardy (15.2%), Lazio (11.2%) and Campania (9.7%).
54.9% of the total number of businesses is represented by restaurants and mobile food service activities, followed by cafés (44.1%), slightly decreasing (-0.6%) especially in the large cities of the Centre-North, and businesses that supply prepared meals for canteens and catering (1% of the total), the latter amounting to 3,276 units.
Business turnover in food services continues to be high in 2018, with a decrease of 12,305 units and a significant contraction of sole proprietorships (-6,871). However, the economic performance of catering companies is positive: the turnover index is up in the third quarter of 2019 (+2.1% compared to the same period in 2018).
Employment stood at 1.2 million people; even with a slight labour input (+1.7%), hours worked increased (+4.6%). However, the productivity of the sector continues to remain low: the value per unit of work is 38,700 euro, 41% lower than the overall figure for the national economy. Employees represent over 60% of the employed (918,105 units, +6.3%), even if in recent years there has been a slight increase in the share of independent work. The use of open-ended contracts is very widespread (62%), while the use of seasonal work is marginal (5.7%).
According to a survey of cafés and restaurants conducted by FIPE and published on 20 July 2020, the average drop in revenue for these businesses went from 50.3% in the first month of reopening to 41.1% in the second. Only 7.2% of entrepreneurs achieved a turnover in line with the pre-Covid period, while 30.3%, or almost one in three companies, collected between 50 and 60% less. The closure

Active food service companies, 2018

	Food services			
	Restaurants and mobile food services	Cafés and other similar establishments without a kitchen	Canteens and catering	Total
Piemonte	13,166	10,400	175	23,741
Valle d'Aosta	605	505	4	1,114
Lombardy	25,843	24,546	627	51,016
Trentino-Alto Adige	3,043	2,551	67	5,661
Veneto	13,813	12,191	173	26,177
Friuli-Venezia Giulia	3,735	3,479	34	7,248
Liguria	6,926	5,900	91	12,917
Emilia-Romagna	13,628	11,618	156	25,402
Tuscany	13,493	8,799	246	22,538
Umbria	2,587	2,035	61	4,683
Marche	5,022	3,378	64	8,464
Lazio	21,346	15,697	472	37,515
Abruzzo	4,875	3,285	71	8,231
Molise	1,003	898	21	1,922
Campania	17,460	14,742	385	32,587
Puglia	11,095	8,461	132	19,688
Basilicata	1,333	1,434	41	2,808
Calabria	6,123	4,531	118	10,772
Sicily	13,573	8,682	232	22,487
Sardinia	5,918	5,142	106	11,166
Italy	**184,587**	**148,274**	**3,276**	**336,137**

Source: FIPE Survey on Catering services, 2019.

of businesses had strong repercussions on employment, with an average drop of 19.8%: 42.4% of businesses kept their staff when they reopened, while 18.1% had to halve the number of employees.

In 2019, Italian exports of agri-food products exceeded 43.8 billion euro, an increase in value of 4.4% compared to 2018. Imports, after growing by more than 5% in 2017 and falling by 1.6% in 2018, returned to growth in 2019 (+1.6%), reaching 44.5 billion euro. This trend resulted in a further improvement in the deficit of the agri-food balance, which fell for the first time below one billion euro (-708 million).

In 2019, the EU28 area accounted for 70.5% of Italy's purchases from abroad and just over 65% of sales. These figures are down compared to 2018, especially for exports, where the share of the EU area decreased by more than one percentage point. On the other hand, North America and Asia consolidated their role as the main non-EU outlet markets for Italian food products, increasing their share by about half a percentage point.

On the export side, the top five customer countries (Germany, France, the United

Agro-industrial balance and agro-industrial system*

MACROECONOMIC AGGREGATES		2000	2018	2019
Total agro-industrial production[1]	(P)	67,899	90,848	92,169
Imports	(I)	25,358	43,819	44,540
Exports	(E)	16,867	42,000	43,832
Balance	(E-I)	-8,491	-1,819	-708
Trade volume[2]	(E+I)	42,225	85,818	88,372
Apparent consumption[3]	(C = P+I-E)	76,390	92,667	92,877
INDICATORS (%)				
Degree of self-sufficiency[4]	(P/C)	88.9	98.0	99.2
Propensity to import[5]	(I/C)	33.2	47.3	48.0
Propensity to export[6]	(E/P)	24.8	46.2	47.6
Degree of trade coverage[7]	(E/I)	66.5	95.8	98.4

* Millions of current euro, the figures for the agro-industrial production include also the item "processed tobacco".

[1] Agriculture, forestry and fisheries production and added value of food industry at basic prices.

[2] Sum of exports and imports

[3] Agro-industrial production plus imports and minus exports

[4] Ratio of production to consumption

[5] Ratio of imports to consumption

[6] Ratio of exports to production

[7] Ratio of exports to imports

Source: CREA Policies and Bioeconomy calculations on ISTAT data.

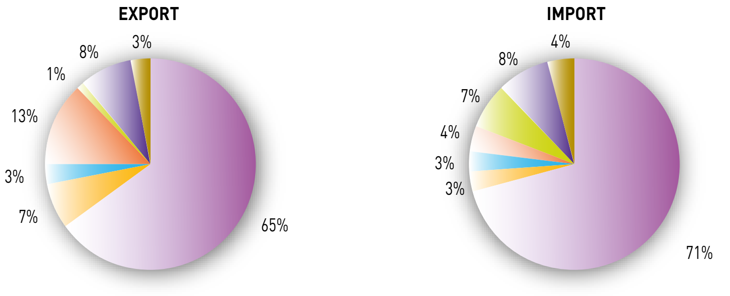
States, the United Kingdom and Spain) absorb more than half of the value of foreign sales of agri-food products, a stable share compared to 2018. Exports are growing to all these countries, with an increase that reaches 11% for the United States, thanks to the excellent performance of all the main Made in Italy products.

45% of Italy's agri-food imports come from France, Germany, Spain and the Netherlands. Inflows from these countries grew in value between 3% and 4% in 2019, with the exception of France, which is essentially stable compared to 2018.

From a commodity point of view, the growth of agri-food exports in 2019 involved the food industry sector (+4.1%) and beverages (+7%), which offset the negative trend of the agricultural sector (-1.9%). As regards imports, on the other hand, growth affected all sectors, although it was clearly sharper for primary products (+4.1%) and beverages (+3.4%).

As already seen in 2018, the reduction in exports of the primary sector was affect-

Italy's agri-food trade by geographic area (current million euro), 2019



EXPORT

(current million euro)	TOTAL 43.832
EU 28	28.585
Germany	7.218
Other non-Mediterranean European countries	2.932
Switzerland	1.602
TMC (Third Mediterranean Countries)	1.367
Israel	283
North America	5.550
United States of America	4.662
Central-South America	627
Asia non-Mediterranean	3.446
Japan	861
More	1.324

IMPORT

(current million euro)	TOTAL 44.540
EU 28	31.403
France	5.886
Other non-Mediterranean European countries	1.399
TMC (Third Mediterranean Countries	1.557
Turkey	615
North America	1.721
United States of America	1.302
South America	3.098
Argentina	977
Asia non-Mediterranean	3.357
Indonesia	814
More	2.006

Source: CREA Policies and Bioeconomy calculations on ISTAT data.

Foreign trade by main agri-food sectors (million euro), 2019

	Import	Export	Sn (%)
Seeds	546,7	321,9	-25.9
Grains	2,775,6	49,8	-96.5
Fresh pulses and vegetables	916,5	1,303,1	17.4
Dried pulses and vegetables	243,3	44,8	-68.9
Citrus	349,2	226,5	-21.3
Tropical fruits	728,8	81,2	-79.9
Other fresh fruit	703,5	2,406,4	54.8
Dried fruits	1,444,2	503,4	-48.3
Fibrous crude vegetables	59,8	4,9	-84.9
Oil seeds and oil fruits	942,3	30,7	-93.7
Cocoa, coffee, tea and spices	1,543,8	92,7	-88.7
Horticultural products	531,8	902,9	25.9
Raw tobacco	151,0	280,8	30.1
Live animals	1,567,6	59,8	-92.6
Other livestock farm products	547,0	56,8	-81.2
Forestry products	587,9	155,3	-58.2
Fishery products	1,419,6	244,9	-70.6
Hunting products	49,6	5,3	-80.8
TOTAL PRIMARY SECTOR	**15,108,2**	**6,771,1**	**-38.1**
Rice	143,6	565,0	59.5
Grain derivatives	1,428,1	5,422,6	58.3
Sugar	746,3	129,3	-70.5

	Import	Export	Sn (%)
Confectionery products	1,048,7	2,107,0	33.5
Fresh and frozen meat	4,571,2	1,175,3	-59.1
Prepared meats	374,9	1,737,2	64.5
Fish products	4,390,5	449,4	-81.4
Processed vegetables	1,173,8	2,743,4	40.1
Processed fruit	625,7	1,152,8	29.6
Dairy products	3,834,3	3,745,7	-1.2
Oils and fats	3,390,3	2,008,0	-25.6
Animal feed	2,000,7	1,183,2	-25.7
Other food industry products	2,205,2	4,569,2	34.9
Other non-food products	1,239,5	385,0	-52.6
TOTAL FOOD IND. (excluding beverages)	**27,172,7**	**27,373,2**	**0.4**
Wine	324,4	6,585,2	90.6
Musts	12,7	42,8	54.3
Other spirits	1,338,4	1,615,9	9.4
Non-alcoholic beverages	244,1	1,141,3	64.8
TOTAL BEVERAGES	**1,919,6**	**9,385,2**	**66.0**
TOTAL FOOD AND BEVERAGE	**29,092,4**	**36,758,3**	**11.6**
Other agri-food products (sub-threshold: 1-24)	339,6	302,2	-5.8
TOTAL AGRI-FOOD BALANCE	**44,540,1**	**43,831,7**	**-0.8**

Source: CREA Policies and Bioeconomy calculations on ISTAT data.

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

	2019 (million euro)	% change 2019/2018	
		current values	quantity
Grains	6,8	19.6	10.2
Fresh fruit	2,425,7	-4.6	1.8
Fresh vegetables	1,132,3	-0.6	-6.3
Horticultural products	718,9	1.4	0.6
MADE IN ITALY AGRICULTURAL PRODUCTS	**4,283,6**	**-2.5**	**-0.1**
Rice	565,0	3.4	-6.2
Processed tomato	1,903,4	6.9	4.2
Fruit juices and cider	581,6	-8.1	-0.4
Other vegetables or fruit, prepared or preserved	1,252,7	2.8	0.5
Cold meats	1,649,0	1.1	-1.3
Cheeses	2,136,9	12.7	5.5
Olive oil	1,365,1	-7.7	2.1
Packaged wine	6,164,2	4.4	6.3
Bulk wine	378,0	-4.8	27.5
Vinegar	258,1	-2.7	0.8
Mineral waters	603,7	6.1	3.7
Essences	156,9	-2.5	3.1
Other processed products	1,070,2	7.4	6.5
MADE IN ITALY PROCESSED PRODUCTS	**18,084,7**	**3.4**	**4.0**
Pasta	2,599,1	7.1	6.2
Bakery products	2,375,3	11.7	9.9
Other grain derivatives	216,4	3.9	-3.9
Cocoa confectionery products	1,929,2	6.5	6.2
Ice cream	212,6	-16.1	-18.5
Coffee	1,446,4	6.5	17.4
Spirits and liqueurs	1,118,6	23.4	16.6
MADE IN ITALY FOOD INDUSTRY PRODUCTS	**9,897,6**	**8.9**	**6.7**
TOTAL MADE IN ITALY	**32,265,9**	**4.2**	**3.8**

* The sectors in this table are made up of Made in Italy products: a subset of agri-food products, with a stable positive balance and/or that are known to recall our country from an image point of view.
Source: CREA Policies and Bioeconomy calculations on ISTAT data.

ed by the decline in value of "other fresh fruit" (-3%), the main sector of the industry. On the other hand, exports of pulses and fresh vegetables, the second main sector, increased in value (+0.9%) but not in quantity. The two main sectors driving the growth in food industry exports are grain derivatives and dairy products, with increases of 8.5% in both cases. On the other hand, the value flows of processed fruit and oils and fats fell by almost 4%. As in 2018, the sharp increase in value of beverage exports (+7%) is linked to wine and "other spirits", the latter growing by more than 20% in value.
Also on the import side, the increase in the beverage sector is attributable to "other spirits," which grew 7%. In the food industry sector, the trend is varied, with some significant increases, such as for fresh and frozen meat (+5.9%) and processed fruit (+4.7%), and some significant contractions for fish products (-4%) and oils and fats (-4.6%). In addition to grains (+8.5%), the increase in imports

in the primary sector was driven by fresh pulses and vegetables and dried fruit, both up by around 20%. For dried fruit, almonds from the United States and Spain and hazelnuts from Turkey accounted for the largest purchases.

Made in Italy, the set of agri-food products with a stable positive balance and with a well-known link to our country from the image point of view, represents 73.6% of our country's agri-food exports in 2019, a share slightly down from 2018. The increase in value of Made in Italy exports was 4.2%, compared to 4.4% for the agri-food industry as a whole. This growth concerned primary (+3.4%) and, above all, secondary processing (+8.9%) products, while exports of the primary component fell by 2.5%.

The largest share of Made in Italy exports is attributable to first-stage processing products, with a share of 56%. Within the aggregate, the value of exports of the main segment, packaged wine, is clearly up over 2018 (+4.4%). There was also a significant increase in processed tomatoes (+6.9%) and, above all, cheese (+12.7%). On the other hand, the value of olive oil exports fell sharply (-7.7%), although they grew by more than 2% in quantity.

Exports of second-stage processing products (Made in Italy food industry) represent more than 30% of total Made in Italy exports and 22.6% of total agri-food exports. The positive trend, both in value and quantity, concerns all sectors of the aggregate, with the exception of ice cream and the quantities exported of "other grain derivatives". Among the main products of the aggregate, as already found in 2018, the growth is driven by the higher exports of "spirits and liqueurs" and bakery products.

Compared to the same period in 2019, the figures on agri-food trade in the first half of 2020 show a drop in value of 4.6% for Italy's imports, while exports are up by more than 2%. The half-yearly import result is attributable exclusively to the trend in the second quarter, with a drop in value of over 12%, which cancels out the increase in the first quarter (+3.2%).

NUTRITION AND FOOD CULTURE

2019 marks a year that is not particularly favourable for the development of organic farming. In some southern regions, such as Calabria (-4.6%), Sicily (-1.5%) and Sardinia (-5.9%), organic producers are increasingly abandoning the control system. In the North, the cases of Valle d'Aosta (-3.8%) and especially Friuli-Venezia Giulia (-11.3%) stand out. The reduction in the number of organic operators mostly regards exclusive producers, while mixed producers are increasing, i.e. those who not only produce but also process. The number of processors decreases in Marche (-9.6%) and strongly increases in Calabria (+11.8%), although the northern regions are still the ones with the highest number, such as Lombardy (1,133 units), Emilia-Romagna (1,073) and Veneto (1,008).

The organic surface area instead decreases more in the North, especially in Friuli-Venezia Giulia (22.5%); in the South, instead, it decreases in Sicily and especially in Campania. The region with the largest contraction of the average organic UAA is Marche (-22.5%), followed in order by Friuli-Venezia Giulia (-12.7%), Campania (-5.9%), Lazio (-5.6%), Liguria (-5.2%), Sicily (-2.4%), Basilicata (-1.7%) and Piemonte (-1.1%). Overall, Calabria is the only region in Italy where the incidence of organic UAA exceeds 30%, but there are now several regions with a share greater than 20%, located, however, only in Central and Southern Italy.

The surface area under conversion is down by as much as 18% compared to 2018. This figure is rather negative, especially in view of the goal of reaching 25% of organic land by 2030 set in the Farm to Fork Strategy. It is mainly permanent crops that show the largest reduction in surface area under conversion, with olive trees being the most significant (-30%). Nuts and citrus fruits show a contraction of more than 22%. The conversion of vineyards (-20.1%) has also slowed down, despite the fact that the consumption of organic wine is increasing not only in Italy but also in Western countries. Regarding organic livestock, the contraction in equine, swine, sheep and goats is exacerbated in 2019 compared to 2018. Among the reasons for this negative trend are the recognition of a production price for organic sheep and goat milk that is not sufficient to cover production costs and the low level of payments linked to grassland and pasture in Sardinia, where sheep and goat farms are widespread. Difficulties in marketing fresh and processed products, on the other hand, could explain the reduction in the number of organically raised horses and pigs. Although to a lesser extent, organic cattle and above all poultry are growing, but the real news is represented by the sustained increase in the number of beehives (+10.5%) after several years of decline.

Organic operators by region, 2019

	Producers exclusive		Producers/ processors		Exclusive processors		Overall operators[1]	
	no.	% change 2019/18	no.	% change 2019/18	no.	% change 2019/18	no.	% change 2019/18
Piemonte	1,939	-1.1	599	7.5	577	3.8	3,180	1.4
Valle d'Aosta	60	-1.6	15	-11.8	15	0.0	90	-3.2
Lombardy	1,500	-1.1	498	5.5	1,133	6.0	3,238	3.0
Liguria	253	5.0	82	0.0	164	5.1	519	4.6
Trentino-Alto Adige	2,279	0.5	307	25.3	459	2.7	3,063	3.0
Veneto	2,294	13.3	605	31.2	1,008	3.5	3,971	12.7
Friuli-Venezia Giulia	576	-13.8	147	0.0	190	6.7	920	-8.2
Emilia-Romagna	4,190	0.0	678	11.0	1,073	3.4	6,027	1.8
Tuscany	2,730	-3.0	1,829	6.7	672	-0.3	5,271	0.7
Umbria	1,494	6.1	379	5.6	199	2.6	2,083	5.7
Marche	3,126	28.8	499	126.8	283	-9.6	3,918	32.1
Lazio	4,043	9.4	562	3.1	504	2.4	5,122	7.9
Abruzzo	1,386	-1.5	341	10.4	279	3.0	2,009	1.0
Molise	378	-3.6	61	52.5	75	7.1	516	2.4
Campania	4,931	-3.4	377	4.1	579	5.7	5,918	-2.1
Puglia	7,227	-1.2	1,304	11.5	834	7.2	9,380	1.1
Basilicata	2,136	3.5	116	13.7	107	1.9	2,359	3.9
Calabria	8,606	-9.5	1,615	34.7	350	11.8	10,576	-4.1
Sicily	7,951	-2.6	1,668	4.4	950	0.3	10,596	-1.3
Sardinia	1,598	-6.8	161	3.9	125	5.0	1,887	-5.2
Italy	**58,697**	**-0.4**	**11,843**	**14.3**	**9,576**	**3.4**	**80,643**	**2.0**

[1] The sum of producers and processors is not the same as the total operators, which also includes importers.
Source: calculations based on SINAB data.

Organic area by region, 2019

	Organic UAA[1]				Incidence on total UAA[2]
	ha	%	% change 2019/18	farm av. (ha)	%
Piemonte	50,786	2.5	-0.3	20.0	5.3
Valle d'Aosta	3,296	0.2	-2.1	43.9	6.2
Lombardy	56,557	2.8	5.1	28.3	5.9
Liguria	4,335	0.2	-1.6	12.9	11.2
Trentino-Alto Adige	18,752	0.9	11.2	7.3	5.6
Veneto	48,338	2.4	25.4	16.7	6.2
Friuli-Venezia Giulia	12,800	0.6	-22.5	17.7	5.5
Emilia-Romagna	166,525	8.4	7.2	34.2	15.4
Tuscany	143,656	7.2	4.0	31.5	21.7
Umbria	46,595	2.3	7.6	24.9	13.9
Marche	104,567	5.2	6.1	28.8	22.2
Lazio	144,035	7.2	2.5	31.3	23.2
Abruzzo	42,681	2.1	6.8	24.7	11.4
Molise	11,964	0.6	6.7	27.3	6.2
Campania	69,096	3.5	-8.7	13.0	13.1
Puglia	266,274	13.4	1.0	31.2	20.7
Basilicata	103,234	5.2	2.2	45.8	21.0
Calabria	208,292	10.4	3.7	20.4	36.4
Sicily	370,622	18.6	-3.8	38.5	25.8
Sardinia	120,828	6.1	0.8	68.7	10.2
Italy	**1,993,233**	**100.0**	**1.8**	**28.3**	**15.8**

[1] Organic and in-conversion UAA.
[2] Total UAA from the 2016 SPA survey, ISTAT.
Source: calculations based on SINAB and ISTAT data.

Organic surface area by type of farming, 2019

Production type	UAA			Incidence org+conv. / total	Var. UAA 2019/18
	in conversion	organic	total		
	ha			%	
Total arable land	171,114	732,096	903,210	45.3	1.8
of which:					
Grains	62,109	268,175	330,284	16.6	1.3
Protein, legumes and grain crops	7,869	39,653	47,522	2.4	-5.9
Root crops	885	2,819	3,704	0.2	37.4
Industrial crops	6,638	29,770	36,408	1.8	9.8
Fresh vegetables, strawberries, cultivated mushrooms	11,768	53,315	65,083	3.3	6.4
Forage	74,546	322,203	396,749	19.9	1.2
Other arable land	7,299	16,161	23,460	1.2	10.0
Permanent grassland and pasture	104,984	446,091	551,075	27.6	2.0
Total permanent	91,973	388,486	480,459	24.1	1.9
of which:					
Fruit[1]	9,722	27,352	37,074	1.9	0.4
Nuts	10,820	39,793	50,613	2.5	0.7
Citrus	4,995	31,813	36,808	1.8	3.2
Olive tree	39,434	203,273	242,707	12.2	1.5
Grapevine	25,599	83,825	109,424	5.5	2.8
Other permanent crops	1,403	2,430	3,833	0.2	28.7
Fallow land	15,060	43,433	58,493	2.9	-1.8
Total	383,131	1,610,106	1,993,237	100.0	1.8

[1] Fruit includes “temperate zone fruit”, “subtropical zone fruit”, “small fruits”.
Source: calculations based on SINAB data.

Size of organic livestock by livestock species, 2019

	no. of heads	% change 2019/18	% of total livestock population[1]	ALU[2]
Cattle	389,665	3.8	6.8	311,732
Sheep	596,182	-12.4	8.5	89,427
Pigs	51,765	-13.2	0.6	15,530
Goats	99,418	-9.7	10.1	14,913
Equines	10,266	-20.9	6.2	10,266
Poultry	3,952,998	13.5	2.5	39,530
Bees (in number of hives)	182,125	10.5		

[1] Overall livestock population (head count) from 2016 Farm Structure and Production Survey, ISTAT.
[2] ALUs are estimated on the basis of the number of animals per species, as detailed data are not available on the different categories of livestock.
Source: calculations based on SINAB data.

Agri-food products

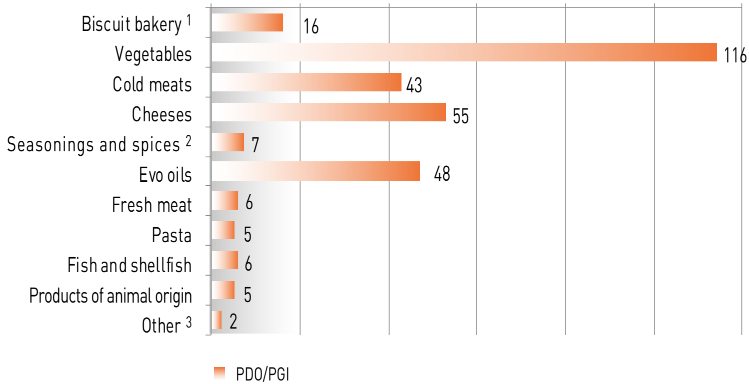
Italy continues to hold the record for PDO-PGI agri-food products in the EU with 309 registered products. With the registration of the traditional dish Amatriciana, there are now three traditional specialities guaranteed (TSG) in Italy.

The strengthening of the supply chain also continues: according to ISTAT, the number of operators involved in protected production has increased by 3.4%, reaching 88,490, thanks to the expansion of agricultural producers (+4.4%) which represent almost 95% of the total operators. There was a sharp increase in the number of farms, with a total number of 44,714 (+11.7%), thanks to the contribution of the cheese sector (27,898 farms, +3.9%), processed meats (7,091 farms, +84%) and fresh meats (9,050 farms, +2.7%). The surface area, on the other hand, decreased to 229,912 hectares (-1.2%), due to lower investments in olive oil (-9.8%) and in other sectors (-6.1%). On the other hand, there was a strong increase in the UAA dedicated to the cultivation of fruit, vegetables and grains (+15.2%).

Considering also the PGI wine sector, in 2019 the value of production under designation represents 19% of the agri-food total, reaching 17 billion euro. Agri-food alone, excluding wines, stands at 7.7 billion euro (+5.7% compared to 2018), but if we consider the result achieved in the long term, the growth was 54% in the last decade.

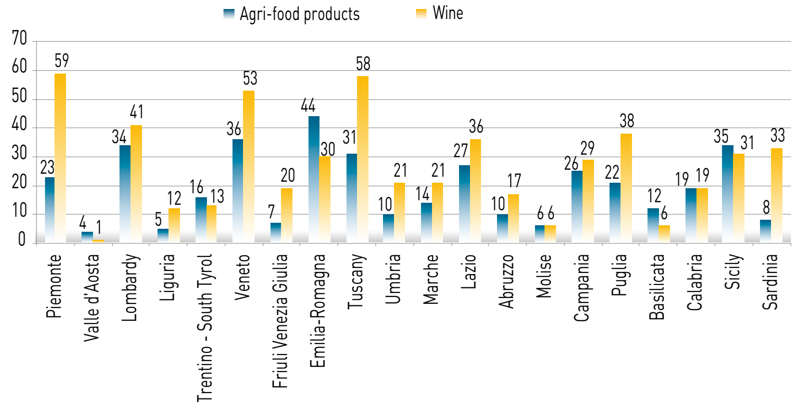
The sectors with the highest production

Italian PDO, PGI by product categories (no.)



[1] Also includes Modica Chocolate.
[2] Balsamic vinegars, saffron and salt.
[3] Liquorice from Calabria and Bergamot essential oil from Reggio Calabria.
Source: e-Ambrosia database. Update: 31 December 2020.

Number of PDOs, PGIs per region[1]



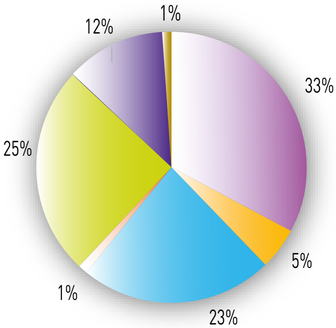
[1] Some products are interregional, so the sum of the products of the regions does not correspond to the total for Italy.
Update as of 31 December 2020.
Source: Qualivita.

growth in 2019 were fruit, vegetables and grains (+34.3%), recovering strongly from the opposite trend recorded in 2018, balsamic vinegars (+5.7%), after the previous year's decline (-7%), and meat products (+3.2%). The production of cheese (+1%) and fresh meat (+1.4%) was stable. On the other hand, olive oils decreased (-11.2%). Cheese and cured meats hold 84% of the total value of PDO-PGI production, amounting to almost 6.5 billion euro. At the opposite end of the spectrum from cheese and cured meats, we find olive oil and the more nutritious basket of fruit and vegetables and grains. The former accounts for just over 1% of the value of production (-4.6% compared to 2018), and fruit and vegetables for 4.2% (+2.1%). After the drop in 2018, balsamic vinegars are growing again, accounting for more than 5% of the total value of PDO-PGIs. Fresh meat accounts 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 entire category. The positioning of the "pasta" category continues to grow thanks to the share of Pasta di Gragnano, which in 2019 entered the ranking of the top 10 PDO-PGIs by production value (247 million euro, +32.6% compared to 2018).

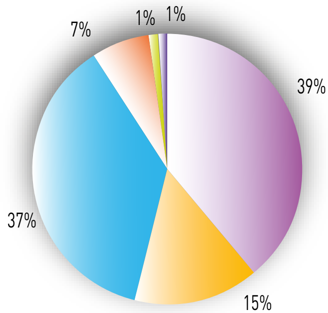
The most economically significant districts are concentrated in the North: Emilia-Romagna, with 3,071 million euro of production, and Lombardy, with 1,773 million euro, occupy the leading positions, followed by Campania and Veneto, which is

PDO and PGI numbers by main categories, 2019

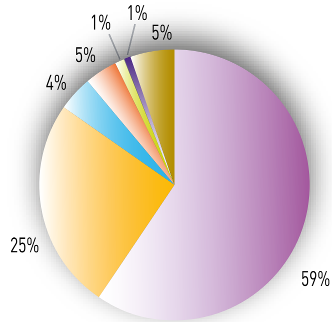
Operators (no.)*



Production (t)



Value of production (million euro)



	Operators (no.)*	Production (t)	Value of production (million euro)
Cheeses	28.801	549.000	4.515
Cold meats	4.018	210.000	1.927
Fruit, vegetables and grains	20.060	513.000	318
Balsamic vinegars[1]	681	96.000	389
Olive oils	21.698	11.000	82
Fresh meat	10.370	14.000	92
Other products	1.136	-	336

* ISTAT, Survey of PDO PGI and TSG agri-food products 2018.
[1] Balsamic vinegars production in litres.
Source: ISTAT and Qualivita-Ismea.

in first place for the combined value of PGI wine with agri-food products (3,946 million euro).

Wines

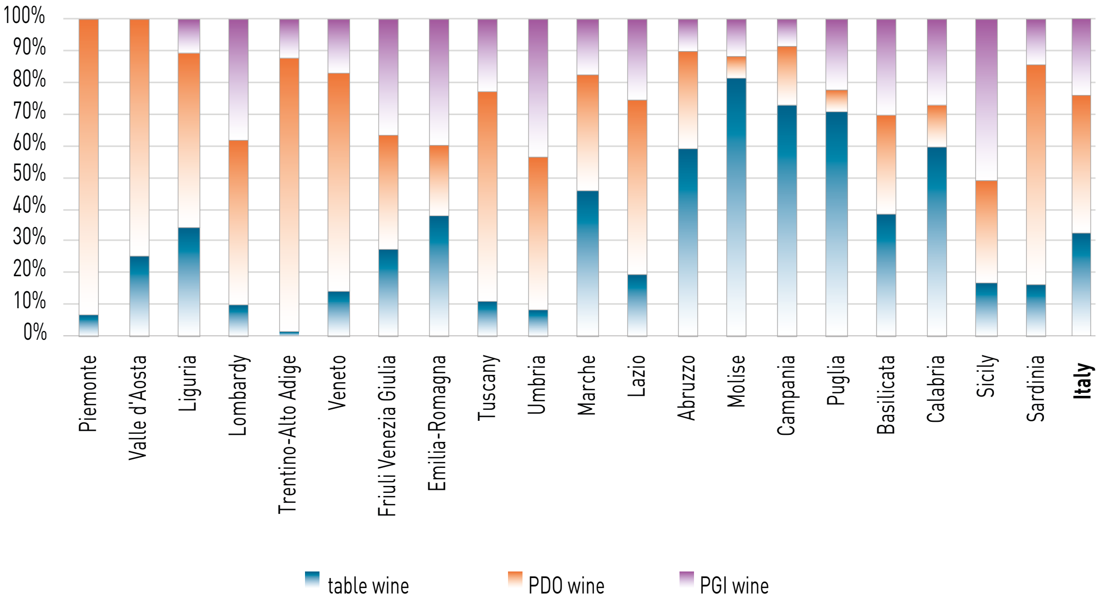
There are 528 Italian wines with designation, 410 are PDO and are divided, according to the traditional Italian term, into 77 CGDO and 333 PDO; the PGI are 118.

The production of PDO wine, which stood at just over 22 million hectolitres in the 2019 vintage, accounts for over 44% of the total wine produced in Italy. With the share of PGI wine (amounting to 11.8 million hectolitres), it comes to a certified production of almost 68% of the total wine production. The 2019 grape harvest was down sharply for all types of wine and in particular for PGI wine (-12.1%). The decline in the PDO component was more moderate (-3.8%). These results, after the record harvest of 2018, bring production back to the average of the last decade and are due to unfavourable weather conditions that only affected production volumes and not the quality of the harvested grapes.

Market performance was not particularly strong in the 2018/19 campaign. According to Ismea data, prices at the origin of PDO wines fell by 9.7% and those of PGI by 10.8%. The share of PDO and PGI wines purchased in the large-scale retail trade channels consolidated, reaching 55% of total wine purchases, with a 5% increase in the value of purchases.

PDO and PGI wines confirm their place in the shortlist of the Italian agri-food products most sold abroad, for a total value that exceeds 5.6 billion euro, an increase of almost 4% compared to 2018. This growth is led by PDO wines and sparkling wines, performing better than the PGIs.

PDO and PGI wine production as a percentage of the total, 2019



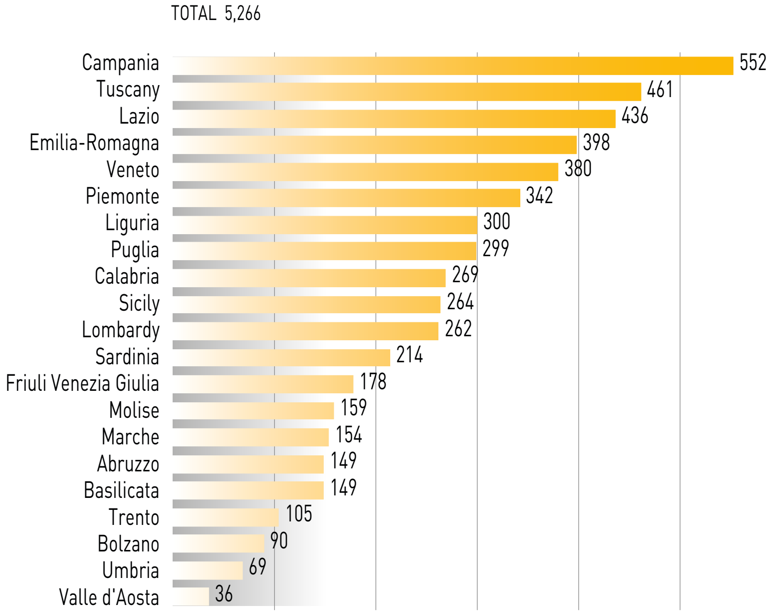
Source: ISTAT.

TRADITIONAL AGRI-FOOD PRODUCTS

Traditional agri-food products (TAP) are those niche products that possess a high gastronomic and cultural value, but to which the Community's protection of designations of origin does not apply. The fundamental requirement in these cases is the traditional processing, conservation and ageing method which has been consolidated over time (for a period of at least 25 years). These products received official recognition with Italian Legislative Decree 173/98, which established a national list at the MIPAAF, updated annually by the Regions. Since 2008, they are defined as an expression of Italian cultural heritage, on a par with the historical, artistic and architectural heritage.

The 20th revision of the list contains 5,266 traditional food specialties, fully 111 more than in 2019, with Campania, Tuscany and Lazio leading the way. Most of the TAPs fall into the categories of "Fresh pasta, bakery products and biscuits" (1,578 products), "Vegetable products" (1,498), as well as "Fresh and processed meats" (809 products).

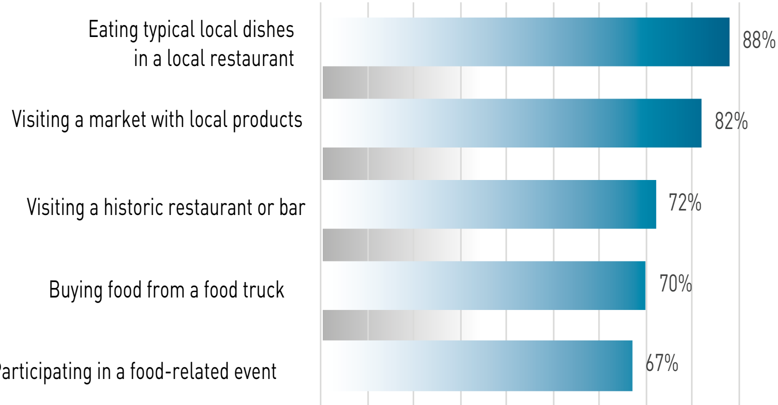
Traditional food products by region (no.), 2020



Source: 20th revision of the national list of traditional food products, MIPAAF decree 10 February 2020.

FOOD AND WINE TOURISM

Preferred food and wine experiences



Source: Italian food and wine tourism report, 2019.

In 2019, tourism in Italy recorded 130.2 million arrivals and 434.7 million presences in accommodation establishments (+0.9%). The share of foreign customers was 50.6% (ISTAT). According to Isnart-Unioncamere and Città del Vino estimates, the contribution of wine and food tourism to the overall tourist flow exceeds 110 million presences. Of these, more than half are foreign tourists, who, in 2019, spent almost 9 billion euro on catering (Banca d'Italia). Wine tourism, in particular, is worth 2.65 billion euro and accounts for 27% of the turnover of wineries (Enit).
These figures will fall dramatically in 2020, due to the closure of accommodation facilities, catering establishments and the blocking of tourist flows during the lockdown and the resulting spending stoppage, in addition to the slow recovery of the sector in the following months.
In 2019, according to the Italian Food and Wine Tourism Report, tourists' interest in food and wine has grown, especially among young people. 59% of tourists say that the presence of a food and wine offering and thematic experiences are priorities when choosing a destination.
Comparing Italy with its major European competitors, Italy is at the top in seven of the indicators considered in the report: production of excellence, wine farms, oil farms, catering farms, museums of taste, breweries. Foreign users search for typical dishes, products, PDO and PGI wines and sparkling wines. The food and wine expe-

riences preferred by Italians are eating typical dishes in local restaurants, visiting a market with local products, visiting a historic restaurant or bar.
According to an analysis by the Chamber of Commerce of Monza Brianza Lodi and Coldiretti, wine shops grew by 4% in the last five years, with 7,209 units; at the regional level, Lombardy is the leader, with 982 wine shops, while at the city level Rome leads with 345 establishments, followed by Naples and Milan, respectively with 221 and 141.
In the March-May 2020 quarter, according to ISTAT estimates based on data from the same period of the previous year, there were at least 81 million less tourists, namely 18.5% of the annual total, of which 56% were foreign customers, with 70.6% at hotel facilities.
Food and wine and the rediscovery of villages in mountain and rural areas continue to attract Italians and foreigners, but in different ways and at different times compared to the pre-Covid period. Because of the restrictions, if on the one hand non-domestic consumption has dropped (-28% the consumption of wine outside the home in 2020 according to Federvini estimates), the demand for the wine tourism experience as proximity tourism seems destined to increase, as it can done outdoors, preferring the vineyard to the winery, together with other gastronomic and naturalistic experiences.

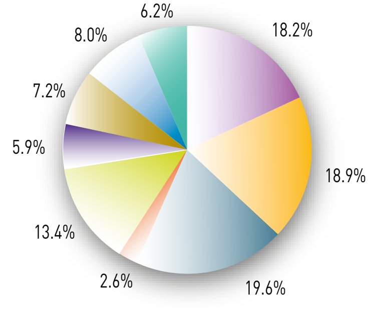
FOOD WASTE

In Italy, more than 5.5 million tonnes of products along the food supply chain were lost or wasted in 2019. This is due to various reasons, ranging from management, logistical and commercial aspects, the not always virtuous behaviour of consumers, as well as organic, climatic and technical factors. Food Losses and Waste (FLW) are worth 10 billion euro, 0.55% of the national GDP, a value that is destined to increase if we also consider the costs linked to the consumption of water and soil and the environmental impact due to the production, processing, packaging, conservation and transport of food products. 80% of FLW are still edible foods, mainly fruit and vegetables, bread, milk and yoghurt, with an average weekly waste per household of 4.9 euro (Waste Watcher Observatory, 2020). 36.6% of FLW occurs during production, 3.1% in processing, 13.5% in distribution, 3.8% in catering and 43% in household consumption (Politecnico di Milano and Fondazione Banco Alimentare Onlus, 2020).

According to ISTAT data, in 2019, 2.9% of agricultural production, or 1.5 million tonnes of products, remained in the fields. More than 300,000 tonnes of vegetables were not harvested in the open air (19.6% of total agricultural waste), followed by pulses, potatoes, tubers and bulbs (18.9%), grains (18.2%) and fresh fruit (13.4%). There are many causes of crop failures: adverse climatic events and plant diseases; commercial considerations; trends in prices at origin; surplus production. The variability of all these factors is reflected in discontinuous levels of waste left in the field for major crops, as shown in the 2009-2019 trend.

On the front of the fight against FLW, Italy has been active for years through the National Plan against food waste and regulatory interventions, national and regional. Law 166/2016 ("Gadda Law"), created with the aim of limiting waste while promoting the redistribution of food

Agricultural production left in the field by sector in Italy, 2019



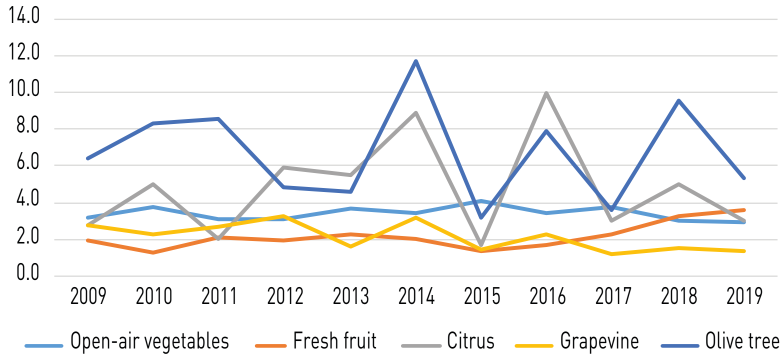
TOTAL	1,532,634 (t)
Grains	278,958
Pulses. potatoes. tubers and bulbs	289,857
Open-air vegetables	300,255
Industrial plants (tobacco. textile plants and oilseed plants)	39,361
Fresh Fruit	205,706
Citrus	90,827
Grapevine	110,076
Olive tree	123,316
Greenhouse vegetables	94,278

Source: ISTAT.

surpluses, allows volunteer associations to recover agricultural products suitable for human and animal consumption that remain in the field, and it has established a fund to promote in restaurants the use of containers for unconsumed food to take home. The law also finances and promotes the redistribution of surpluses for social solidarity purposes. Precisely in favour of the most needy, in 2019 75,449 tonnes of products were recovered from the large-scale retail trade and catering, distributed to 1.5 million needy people through 7,448 charitable entities and canteens (data from the Banco Alimentare Foundation).

According to a survey conducted by the CREA-MIPAAF Observatory on a sample of 2,900 consumers throughout Italy, during the quarantine period there was a greater attention and tendency to more virtuous behaviours, such as storing and consuming food purchased in excess (86% of respondents) or eating leftovers from previous meals (80%).

Trend in agricultural production left in the field for some sectors in Italy (%)



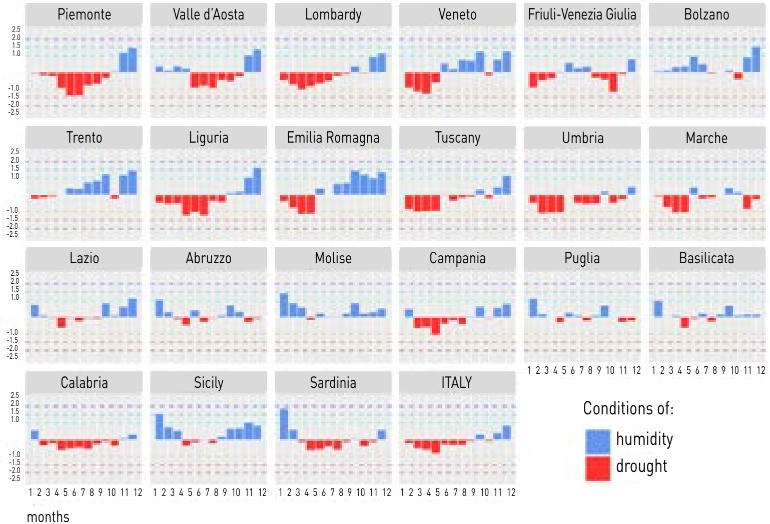
Source: ISTAT.

Following the Covid-19 emergency, many large-scale retail chains joined further actions to support people in difficulty, in collaboration with the Civil Protection Agency, municipalities and volunteer associations, while the Government introduced and strengthened measures in favour of the needy, also intervening in production sectors at greater risk of surpluses. The basket included milk, foods with a higher protein content, processed fruit and vegetables, baby food and quality products such as EVO oil.

ENVIRONMENT

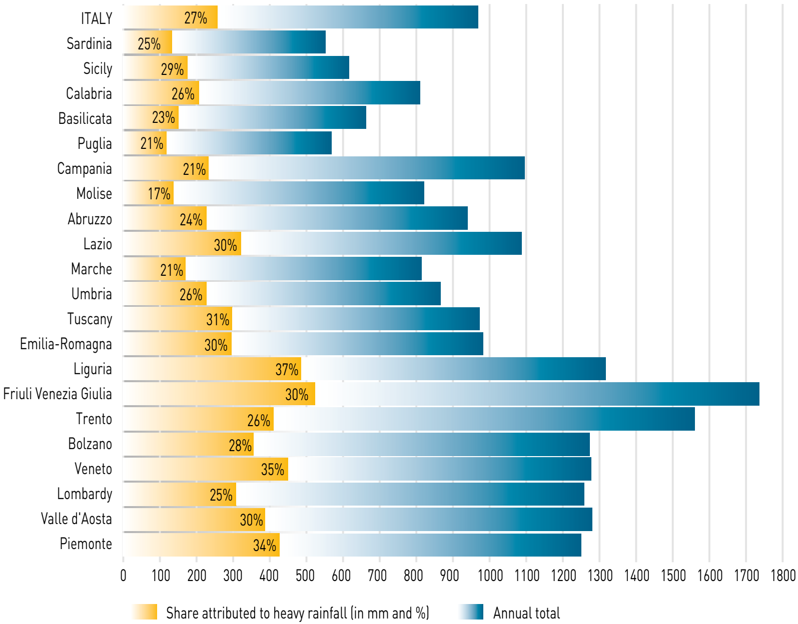
Like 2018, 2019 was warmer than the average of the 1981-2010 climatic reference period, with positive deviations of 1.1 and 1.2 °C for minimum (ΔTn) and maximum (ΔTx) temperatures, respectively. Much higher positive anomalies affected Northern Italy in February (ΔTx > +4°C) and the whole Country in June (ΔTn = +2.3°C and ΔTx = +3.3°C) and November (ΔTn = +2.1°C). On the contrary, the month of May was much colder than the climatic average (ΔTn= -1.8° C and ΔTx= -3.1°C, at the Italy level).
Although the annual rainfall on a national scale (1128 mm) was in line with the climatic average (with a difference of +17 mm), its time distribution was extremely irregular, concentrated in the months of May, with significant positive differences (> 100 mm) especially in Emilia-Romagna, Marche, Lazio, Veneto and Campania, and in November with exceptional generalized increases throughout Italy (+ 169 mm) and particularly intense in north-

Drought index in agriculture SPEI-6months, (Standardized Precipitation Evapotranspiration Index), 2019



Source: CREA Agriculture and Environment on ERA5 data (DOI: 10.24381/cds.adbb2d47) from Copernicus Climate Change Service (C3S).

Heavy rainfall index R95pTOT, 2019



Source: CREA Agriculture and Environment on ERA5 data (DOI: 10.24381/cds.adbb2d47) from Copernicus Climate Change Service (C3S).

ern Italy (up to +324 mm in Friuli Venezia Giulia) and on the Tyrrhenian coast. The severity of the situation is well described by the values of the intense rainfall index (R95pTOT), which shows that 27% (about 300 mm) of the precipitation recorded in Italy in 2019 is attributable to extreme events. This is a generalized phenomenon: values of at least 25% of intense rainfall were reached in almost all regions.

Water availability in agriculture, as measured by the SPEI indicator (Standardized Precipitation Evapotranspiration Index), showed no criticalities at the national scale. Situations of moderate drought (SPEI ≤ -1) mainly affected the North-West, Veneto and Emilia-Romagna; conditions of water surplus occurred in the Islands in the early months of the year and in the North in the latter part of the year.

Overall, 2019 was characterized by many weather disasters, mainly related to wind gusts, tornadoes, and flooding or persistent rains; also noteworthy is the exceptional heat wave that hit the North-west the most in late June, breaking numerous historical records.

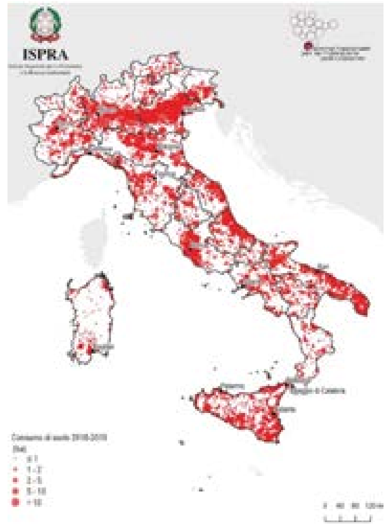
Damage due to meteorological disasters, 2019

Region	Type of disaster events	Damage to production (€)	Damage to company facilities (€)	Damage to infrastructure related to agriculture (€)
Calabria	Rough winds		7,252,000	
Emilia-Romagna	Flooding or persistent rainfall		67,751,000	
	Rough winds		1,658,000	
Friuli-Venezia Giulia	Rough winds		1,280,000	
Liguria	Flooding or persistent rainfall		10,999,000	
Lombardy	Tornadoes		15,919,000	
	Flooding or persistent rainfall		68,830,000	2,851,000
	Rough winds		46,445,000	895,000
Marche	Rough winds		484,000	
Piemonte	Flooding or persistent rainfall			19,613,000
Sardinia	Flooding or persistent rainfall	48,663,000	8,501,000	
	Whirlwind		400,000	
	Hailstones	14,000	207,000	
Veneto	Rough winds		7,705,000	
	Rough winds		149,000	
	Rough winds		3,604,000	
	Flooding or persistent rainfall			37,367,000

Source: CREA-Agriculture and Environment processing on MIPAAF data; data available at 30 September 2020.

Italy ranks among the first places in Europe for the phenomenon of land consumption and has one of the largest extensions and increase of artificial cover.
Data for 2019 indicates an increase in land consumption compared to 2018 of 57.5 square kilometres (an average of 16 hectares per day). Considering the restoration of some areas, the net land consumption stands at 51.9 square kilometres with a stable rate compared to the previous year of 14 hectares/day and still far from the EU objectives of zero net consumption set for 2050.
The percentage of artificial coverage is 7.10% of the national territory (in the 1950s it was 2.7%, +160%) with a surface area of more than 21,000 square kilometres and an increase of more than 7% compared to 2018.
The degree of urbanization, evaluated as the density of artificial surfaces, shows a continuous reduction of rural areas and an increase of suburban and urban areas, with a higher intensity in urban areas and between infrastructural elements.
In 2019, there were land changes at the expense of previously agricultural and herbaceous vegetation soils, including in urban areas, with a concentration in Veneto, Lombardy and the northern plains. Increasing intensities are recorded along the coasts of Sicily and southern Puglia, in the Rome metropolitan area and along the Adriatic coast.
Considering the types of land cover, the land consumption detected at the national level is divided into 61% in urban areas, 32% in agricultural areas, and the remaining 7% in natural areas. Finally, the land consumption predominantly affects areas with vegetation: trees, shrubs and herbaceous surfaces.

Location and absolute values (hectares) of changes generated by land consumption in 2018-2019

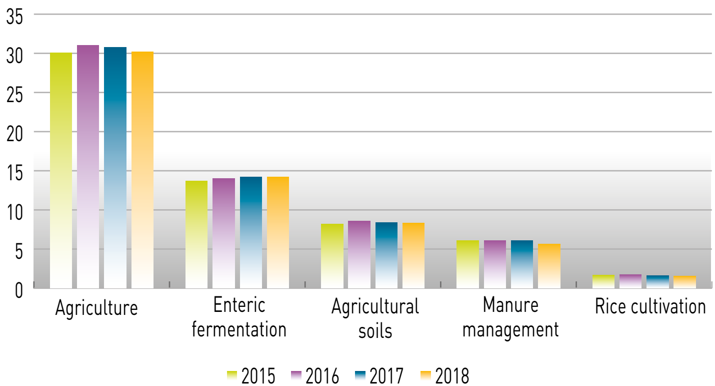


Source: Munafò, M. (ed.), 2020. Land consumption, spatial dynamics and ecosystem services. 2020 Edition. SNPA Report 15/20.

AGRICULTURAL AND FORESTRY SECTOR EMISSIONS

The agricultural and forestry sectors play a key role in achieving emissions reduction targets and consequently in combating ongoing climate change. The former is considered a source, so it must reduce emissions, while the latter holds the largest national carbon stock, so it can contribute by increasing the sequestration of atmospheric CO_2.

Emissions from the agricultural sector, $MtCO_{2e}$



Source: National Inventory of Greenhouse Gas Emissions.

Emissions in agriculture

The emissions from agriculture recorded in 2018 amount to 30.18 $MtCO_{2e}$, and correspond to 6.9% of total greenhouse gas emissions in Italy and 7.6% of total emissions in the EU27.

47% of agricultural emissions in Italy are related to enteric fermentation of livestock, 27.5% to the use of fertilizers on agricultural land, 18.7% to slurry management, and 5.1% to rice cultivation.

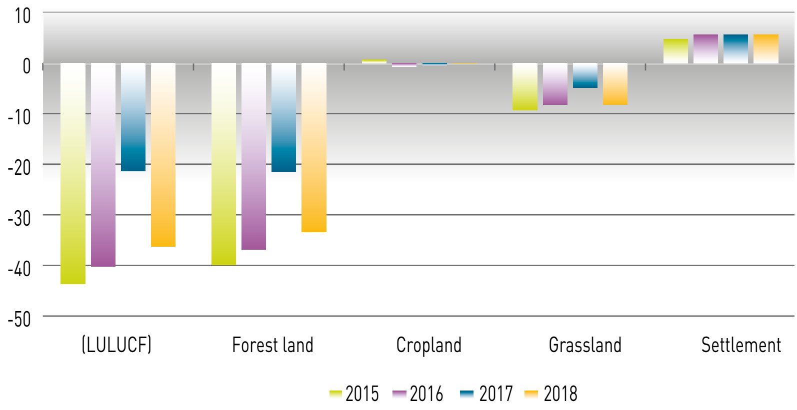
Agricultural emissions gradually declined between 1990 and 2010 from about 34.5 $MtCO_{2e}$ to 30.1 $MtCO_{2e}$, also due to the reduction in UAA, stabilizing in the last 8 years with small fluctuations between 30.8 $MtCO_{2e}$ recorded in 2016 and 30.18 $MtCO_{2e}$ in 2018.

Emissions of methane CH_4 and nitrous oxide N_2O account for 63.8% and 34.8% of total agricultural emissions, respectively, while the remaining 1.4% is attributed to carbon dioxide CO_2.

Emissions by the LULUCF sector

The LULUCF (Land Use, Land Use

Emissions/removals from the LULUCF sector, $MtCO_{2e}$



Source: National Inventory of Greenhouse Gas Emissions

Change and Forestry) sector, along with transport, construction and waste, will contribute for the first time to the EU's 2030 reduction targets as dictated by EU Regulation 2018/841. Emissions from this sector depend on land use changes, such as abandoned agricultural soils being colonized by forests, and human management activities such as sustainable forest management.

According to National Inventory Report (NIR) data, not only forests, but also land use change related to grasslands and crops in Italy contributed to carbon sequestration; the LULUCF sector was able to sequester 36.28 $MtCO_{2e}$.

In 2018, removals from the LULUCF sector increased by an impressive 14.91 $MtCO_{2e}$, 70% more than in 2017, when removals had been significantly smaller due to many fires, which affected some 162,363 hectares of forest and pasture land compared to only 19,481 hectares that went up in smoke in 2018.

In recent years, thanks to the greater spread of more sustainable cultivation practices, such as organic farming or conservation agriculture, crops have shifted from being an emitting source to one that sequesters atmospheric CO_2 emissions.

Forest condition

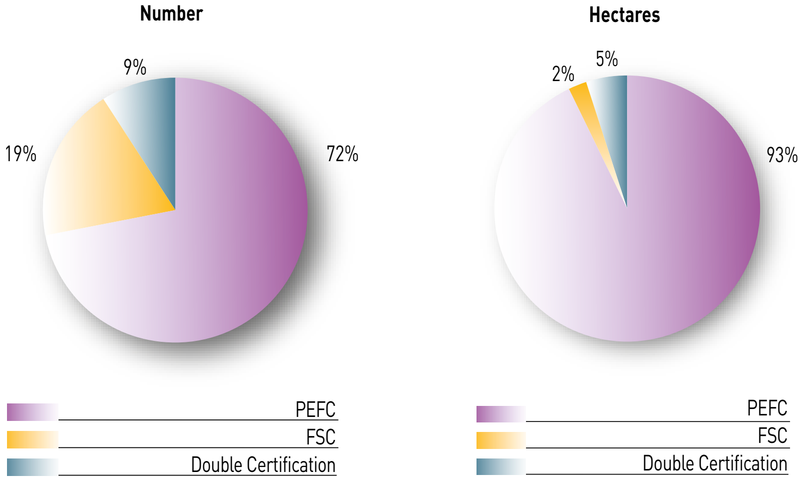
The "Forest condition in Europe 2019" survey analysed the crown condition of 4,890[1] trees in Italy, using defoliation rate as an indicator. Most of the trees analyzed (77.4%) are slightly defoliated by 10-25%, while in 2015 out of 4,757 trees 71.2% were slightly defoliated. 43.1% of conifers have defoliation between 0-10% while only 15.3% of deciduous trees have such low defoliation.

Black pine worsened its status compared to 2018: it went from best health to being the species with the most marked defoliation, especially among younger conifers (<60 years old), with 60% affected by a defoliation rate greater than 25%. The spruce is the conifer with the best health status.

Among deciduous trees, the chestnut tree is confirmed as the most damaged species, 72.9% of young plants and 76.6% of old plants (>60 years old) show a defoliation rate greater than 25%. The healthiest species are austrian oaks among young plants and holm oaks among old plants.

Biotic factors are mainly responsible for damage to vegetation and, in particular,

FSC and PEFC certification in Italy



Source: PEFC Italy, FSC® Italy.

[1] *Page 46 of pdf ICP_Forest Condition in Europe-2019 - No. of sample trees = 4482*
Page 79 paragraph on Italy written by Papitto - took into consideration the condition of the crown of 4890 selected trees.

18.4% is attributable to insects, divided into defoliators (15.2%) and galligens (1.2%), and 4.5% is due to fungi. The other factors responsible for defoliation are frost (2.1%), and to a small extent (down sharply from 2018) drought and high summer temperatures (1.2%).

Forest certification

The Italian forest surface area covered by the certification systems of sustainable forest management, FSC® (Forest Stewardship Council®) and PEFC (Programme for Endorsement of Forest Certification schemes), increased in 2019 by 21% compared to 2014, for a total of 901,819.87 hectares, about 8% of the national forest surface area. The certified surfaces are public property for FSC®, private for PEFC. The most certified form of governance for both entities is the crop forest.

The certification of wood plantations and poplar plantations concerns a little more than 9,993 hectares, i.e. about 10% of all Italian plantations.

The two systems are more concentrated in Trentino-Alto Adige, Friuli-Venezia Giulia, Lombardy, Tuscany and Piemonte. Six entities (1 Friuli-Venezia Giulia, 1 Lombardy, 1 P.A. of Trento, 1 Umbria and 2 Tuscany) are GFS certified with both FSC® and PEFC covering a total of 45,491.94 hectares.

Land cover in landslide hazard areas

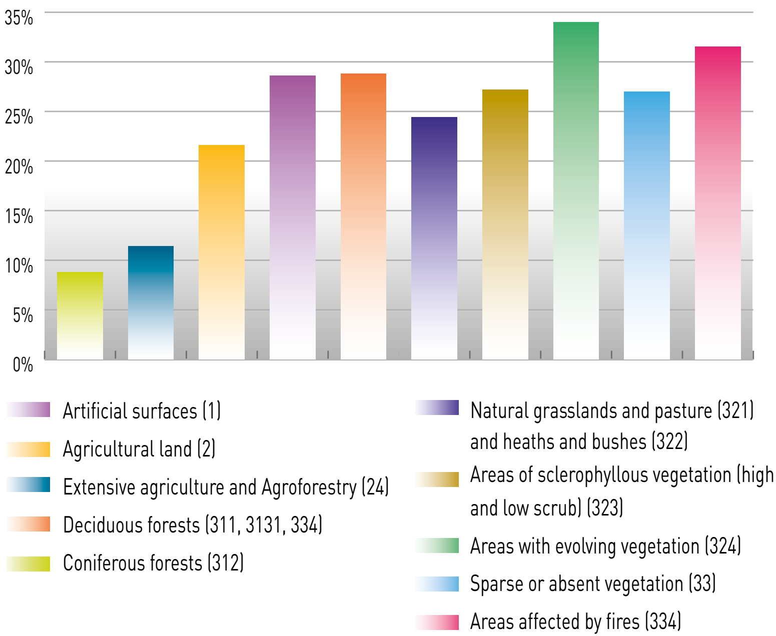
The most recent Corine Land Cover data (ISPRA Report, 2018) show that the class "Wooded land and semi-natural environments" occupies 12,585,535 hectares (41.6% of the national territory) of which 8,004,005 (26.3%) are forest classes (deciduous and coniferous forests overall). The land cover data of this class, divided into 5 groups, were related to the landslide hazard and attention areas (PAI[2], 2017), whose total surface area in Italy is about 5,998,149 km^2 (19.9% of the national territory).

The intersection of the two geographical data in GIS environment has allowed us to analyse the ratio between the surface area of each group in the landslide hazard areas compared to its extension on the whole Italian territory. In this way we can observe the groups with the highest percentage in landslide hazard areas, regardless of their significance at the national level; these, in descending order, are:

- "Areas with evolving woodland and shrub vegetation" covering 335,426, i.e. 1.11% of the national territory;
- "Areas affected by fire", covering a surface area of 9,412 hectares (0% of the national territory);
- "Coniferous forests", 506,436 hectares, 1.7% national surface area;
- "Deciduous forests", 1,781,137 hectares, 5.9% national surface area;
- "Areas with sclerophyllous vegetation (high and low scrub)", 272,470 hectares equal to 0.9% of the national surface area.

[2] *Hydrological planning: http://www.sinanet.isprambiente.it/it/sia-ispra/download-mais/mosaicature-nazionali-ispra-pericolosita-frane-alluvioni/mosaicatura-ispra-2017-aree-pericolosita-frana-pai*

Percentage ratio of land cover classes in landslide hazard areas compared to the entire class throughout the national territory



These figures are consistent with the landslide phenomena and indicate that the "Areas with Evolving Vegetation and Areas Affected by Fire" have the highest percentage ratio in landslide hazard areas.

Fires

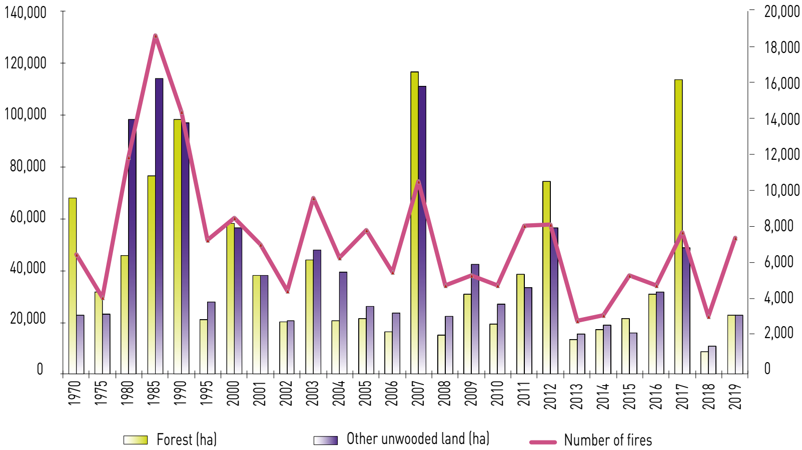
After a favourable trend in 2018, the number of fires in 2019 increased to 7,526 fires, comparable to the 7,846 fires that occurred in 2017, an annus horribilis. However, the surface area burned in 2019, 45,919 hectares, was below the average of the last eighteen years.

The average number of hectares burned per number of fires was 6.10 and was the second lowest in the last 13 years, after 2005.

56% of the burned surface area and 65% of the number of fires affected three Regions: Sicily, Sardinia and Calabria, confirming that these territories are on average the most affected in Italy.

In Sicily we find 29% of the areas involved,

Fire area and number of fires from 1970 to 2019



Source: processing of NIAB data.

equal to 13,379 hectares and 12% of the fires occurred. Sardinia confirms the sad record of 2018 for the number of fires, 44% of the total with 3,344 fires. Piemonte, with its 29.24 hectares, is the region with the highest average fire surface area, followed by Sicily with 14.70 hectares and Puglia with 9.63 hectares.

Investigations by the Carabinieri Forestali reveal that the main cause of fires is arson and that the most frequent motivation is the renewal of grazing.

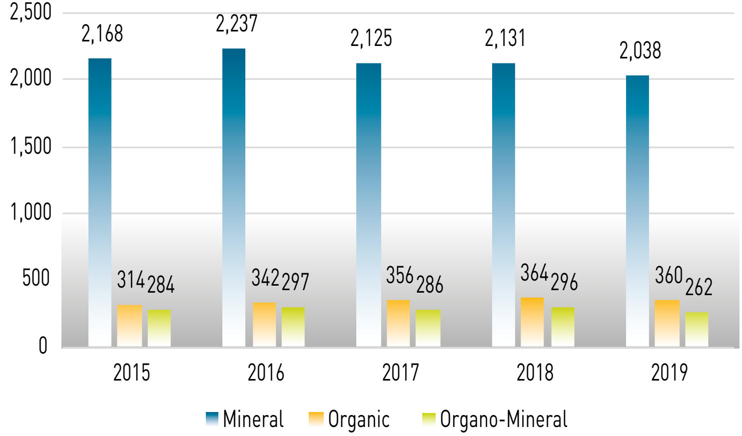
USE OF CHEMICALS

The decrease that has characterized the trend of fertilizer consumptions in recent years is not so much the consequence of a drastic cut of investments by farmers, but rather the result of the rationalization of the use of technical means.

Total fertilizer consumption in Italy confirms the continuing downward trend. The estimate of Assofertilizzanti projected consumption to be slightly lower than 2.7 million tonnes, with a decrease of about 4.7% compared to the previous year. The figure is influenced by the contraction in consumption of both organic fertilizers (-1.2%), organo-mineral fertilizers (-11.5%) and mineral fertilizers (approximately -4.4%). Fertilizers sold to consumers consisted of 91% solid fertilizers, which decreased by 6%, while water-soluble and fluid fertilizers showed positive sales growth of 12.9% and 4% respectively.

The geographical distribution over the country records about 65% of the total amount of fertilizers used in the northern regions, 15% in the central ones and 20% in the southern ones.

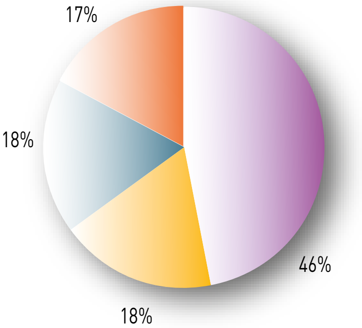
Consumer sales of fertilisers in Italy (000 t)



Source: Assofertilizzanti.

Italy is at the forefront of innovative nutrition: the value of the biostimulants market is estimated at 200 million euro,

Composition of plant protection products used (000 t) 2018



	Total	114.40
	Fungicides	53.73
	Insecticides. acaricides	20.65
	Herbicides	20.26
	Misc	19.76

Source: ISTAT.

with a growth rate of over 10% per year (800 million euro in Europe, 2.5 billion euro worldwide).

According to EFSA's 2018 Report on Pesticide Residues in Europe, Italy is among the countries that best control pesticide residues in food, with a percentage of samples that exceed the limits (1.8%) well below the EU average (4.5%).

In 2019, the pesticide market recorded a slight growth in value (+0.3% approximately), while the change in quantity was negative (-2.9%). The sale of ready-to-use pesticide products in Italy amounted to 948 million euro for 99.6 thousand tonnes.

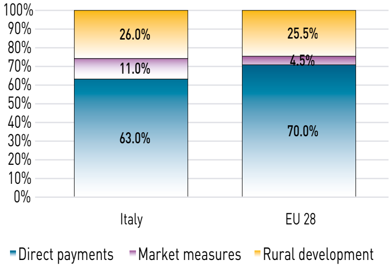
The volume of products and active ingredients distributed in Italy in 2018, according to ISTAT's annual survey on plant protection products, is quantified at about 114.4 thousand tonnes, marking a further decline on the downward trend of recent years (-2.1% compared to 2017). The contraction affected all product categories. Fungicides, amounting to just under 54 thousand tonnes, accounted for 47% of the total, falling by 1.5%. The biggest drop (-7.9%) was recorded by insecticides and acaricides, which represent 18% of the sector, corresponding to almost 21 thousand tonnes. Herbicides (20 thousand t) and other plant protection products (18 thousand t) follow.

The Italian agrochemicals industry accounts for about 1.7% of the value of the global agrochemicals market and ranks sixth in the world. It is third in Europe, preceded only by France and Germany, and contributes 1.5% of the global turnover of the Italian chemical industry (Agrofarma/Federchimica2018 data).

AGRICULTURAL POLICY

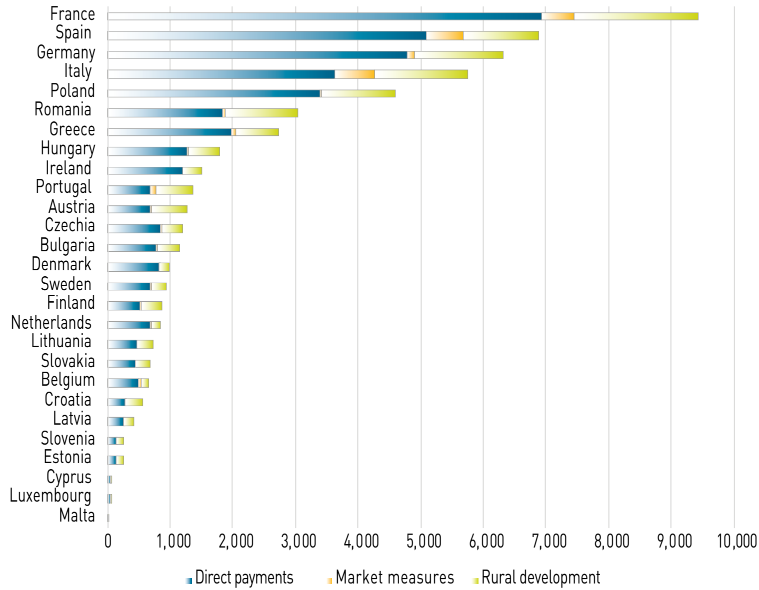
In 2019, the resources allocated to Italy for the implementation of the CAP amount to a total of just over €5.7 billion, 10.6% of the EU total, placing it in fourth place after Germany and just ahead of Poland. In our country, direct payments represent 63% of the total, a lower share than the EU average (70%), mainly due to the higher incidence of market measures.

Distribution of CAP expenditure in Italy and the EU, 2019 (%)



Note: Expenditure for direct payments and market measures; budgetary ceiling for rural development.
Source: EU Commission.

Distribution of CAP expenditure by EU Member State, 2019 (million euro)

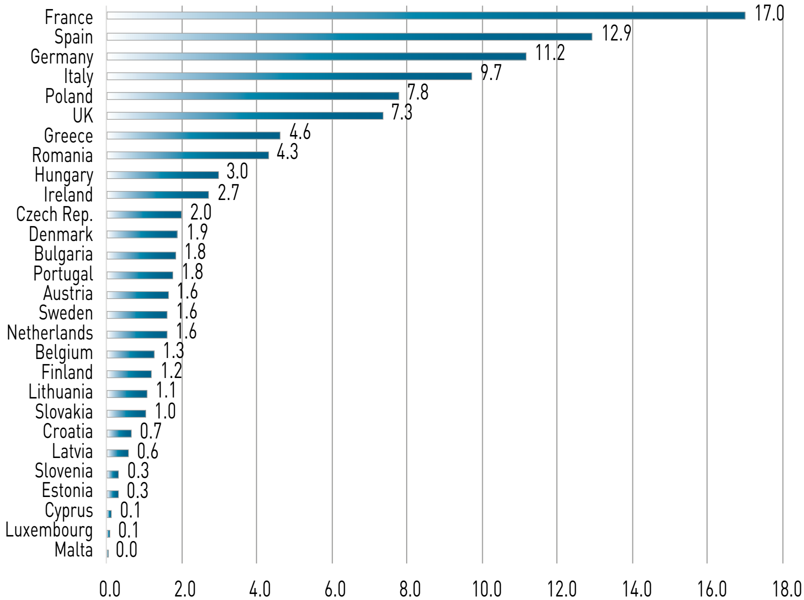


Note: Expenditure for direct payments and market measures; budgetary ceiling for rural development.
Source: EU Commission.

In 2019, France is the largest recipient of Pillar I expenditure, i.e. that financed by the EAGF (17% of the total), followed by Spain. Italy maintains fourth place with a share of 9.7%, after Germany and just before Poland.

A total of 4,273 million euro was spent in Italy (-1.2% compared to 2018). Direct payments represent 85% of the total, a lower weight than at the EU level (94%), due to the greater importance of some of the intervention measures typical of Italy's production system. In particular, the financing of operational programmes of fruit and vegetable producer organisations and the support of national wine programmes represent 6.2% of the EAGF expenditure of our country, which is significantly higher than the 2% of the EU average. The importance of Italy in supporting these sectors is also confirmed by the weight that our country takes within the amount spent by the EU, which is around 30% for wine and fruit and vegetables, reaching

Distribution of EAGF by Member State, 2019 (%)



Source: EU Commission.

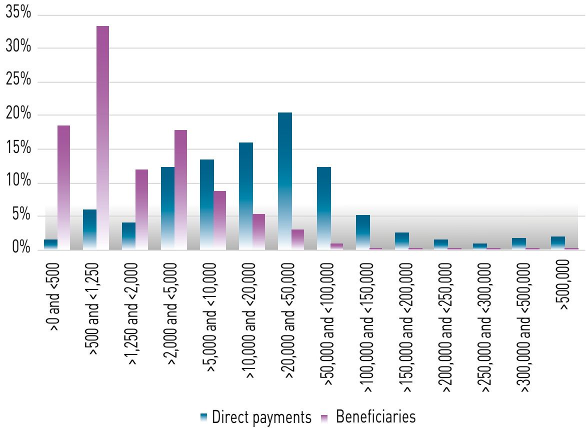
EAGF expenditure by type of intervention, 2019

	Italy		EU		Ita/EU
	million euro	%	million euro	%	%
Interventions in agricultural markets	631,1	14,8	2.473,0	5,6	25,5
- Olive activity programmes	25,3	0,6	36,7	0,1	69,0
- Fruit and vegetables	239,9	5,6	863,6	2,0	27,8
- National support programmes for the wine sector	312,2	7,3	986,2	2,2	31,7
- Other	53,7	1,3	586,6	1,3	9,2
Direct aid	3.633,6	85,0	41.335,7	94,0	8,8
- Decoupled direct aid	3.087,6	72,3	35.328,6	80,4	8,7
- Voluntary coupled scheme (Article 52)	406,8	9,5	3.990,0	9,1	10,2
- Other direct aid	139,1	3,3	2.017,1	4,6	6,9
Other measures	8,4	0,2	153,7	0,3	5,4
TOTAL EAGF*	**4.273,0**	**100,0**	**43.962,4**	**100,0**	**9,7**

* Including administrative costs.
Source: EU Commission.

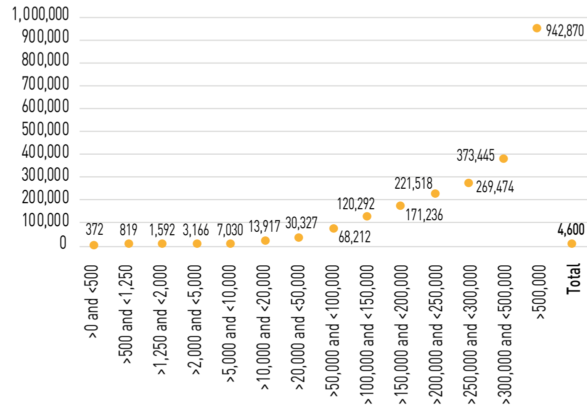
just under 70% for olive oil. Overall, a quarter of Community resources for interventions in agricultural markets is allocated to Italy. It is worth noting that compared to 2018, there is a contraction of this type of expenditure, more significant for the EU (-8.7%) than for Italy (-1.4%). In the area of direct aid, decoupled payments play a major role. Notable among these are the basic payment, which reached 1,977 million euro in Italy (-1.7% compared to 2018), and the green payment, with 1,035 million euro (+1.7%), while the youth payment stood at 75 million euro (+88%). Among the other payments, in addition to the voluntary coupled scheme (around 407 million euro, -3.3%), the small farmers' scheme was particularly notable, with an expenditure of 103 million euro (-27%).
The regional distribution of Pillar I CAP spending in Italy sees Emilia-Romagna and Puglia leading the way with 500 million euro each. However, while in Puglia 90% of these resources take the form of direct aid, in Emilia-Romagna a quarter of the expenditure relates to intervention measures on agricultural markets. Such measures are significant also in Trentino-Alto Adige (about 38% of the regional total), Lazio (28%) and Sicily (about 22%). Direct aid accounts for almost all Pillar I expenditure in Valle d'Aosta, and exceeds 95% in Sardinia and Molise.
The distribution of Pillar I expenditure by class of aid in 2018 in Italy shows that around 82% of beneficiaries received less than 5,000 euro in direct

Distribution of direct payments and beneficiaries by payment class in Italy (euro), 2018



Source: EU Commission.

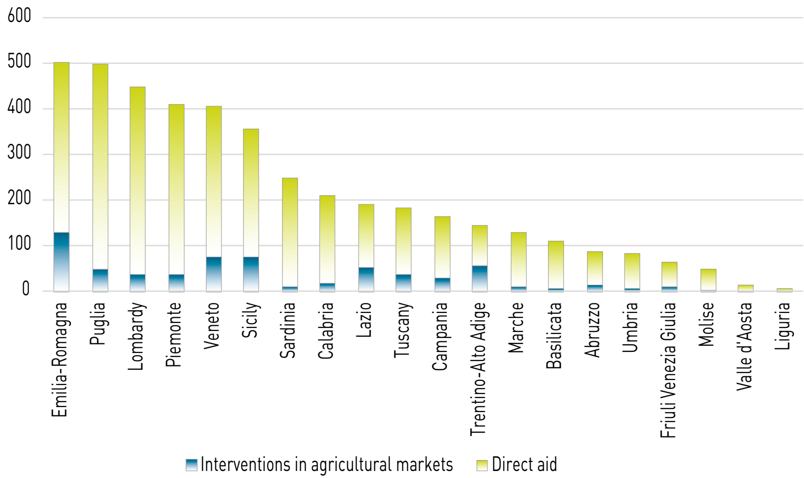
Average payment per beneficiary by payment class in Italy, 2018 (euro/beneficiary)



Source: EU Commission.

payments, accounting for 24% of the total. 62% of payments are concentrated between 5,000 and 100,000 euro, received by 18% of the beneficiaries. Only 0.3% of beneficiaries are in the classes above 100,000 euro and received 14% of direct payments. The average payment is 4,600 euro/farm. However, looking at the individual aid classes, we see a strong dispersion around this value. The average payments are positioned within a range that goes from 370 euro/farm, as the average of the lowest class (≥0 <500 euro), to about 943,000 euro/farm, as the average of the highest class (over 500,000 euro).

Regional distribution of CAP Pillar I expenditure, 2019 (million euro)

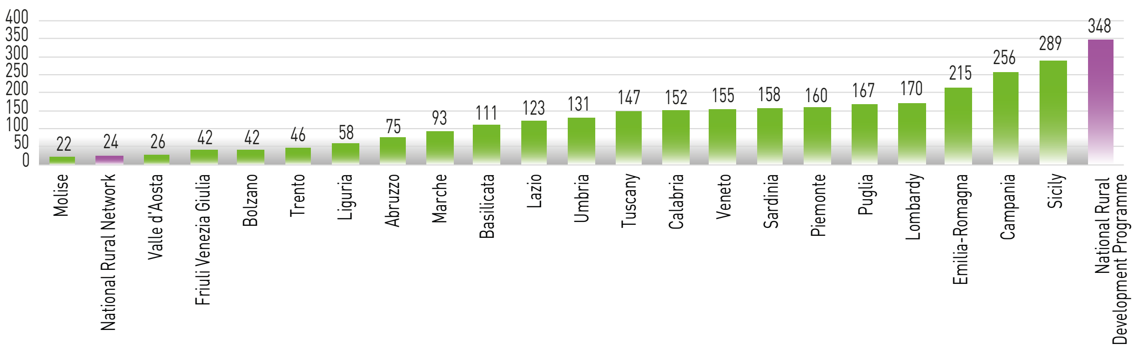


Source: AGEA .

The total public expenditure incurred under Pillar II of the CAP in 2019 is 9,047 million euro, of which 4,441 million euro is from the EU budget. In the penultimate year of the current programming phase, Italy has an absorption capacity of the initial appropriations of 43.3%, with only the Basilicata region having suffered a reduction of the resources by the European Commission (about 86 million euro of EAFRD share) due to the application of the automatic decommitment mechanism (the so-called N+3 rule). The programmes that contribute most to this result are among those with the largest monetary allocations and refer to the National Rural Development Programme (978.3 million euro), the regions of Sicily (869.4 million euro), Campania (715 million euro) and Veneto (665.6 million euro), which alone account for more than one third of the national financial progress.

Public contributions in total disbursed during 2019 amount to 3,010 million euro, with the EAFRD fund contributing 1,570 million euro. The distribution of 2019 public expenditure among individual regional

Distribution by public expenditure programme (million euro), 2019



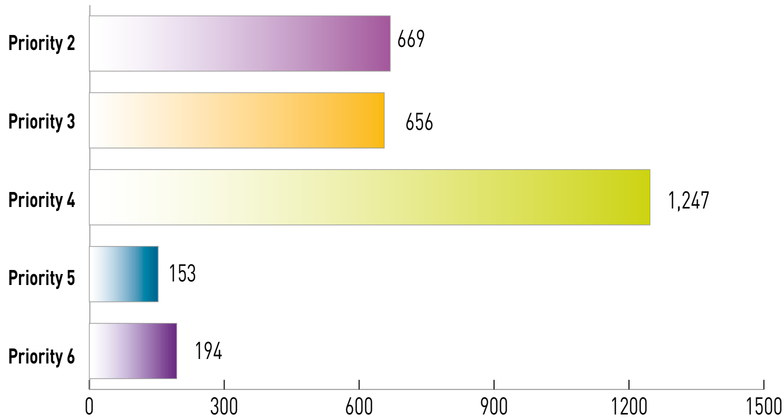
Source: MIPAAF.

Allocations and expenditure 2019 (million euro)

PROGRAMME	Allocations 2014-2020	Expenditure 2019	Total Expenditure	Financial progress (%)
	a	b	c	d = c/a
Piemonte	1,078.9	160.3	499.0	46.3
Valle d'Aosta	136.9	25.8	66.4	48.5
Lombardy	1,142.7	169.9	468.4	41.0
Liguria	309.7	57.6	121.0	39.1
Bolzano	361.7	42.4	234.0	64.7
Trento	297.6	45.6	153.8	51.7
Veneto	1,169.0	155.0	665.6	56.9
Friuli Venezia Giulia	292.3	41.8	124.1	42.5
Emilia-Romagna	1,174.3	214.6	576.6	49.1
Tuscany	949.4	147.4	409.0	43.1
Umbria	928.6	130.8	412.4	44.4
Marche	697.2	93.5	216.2	31.0
Lazio	822.3	122.8	327.7	39.9
Total of most developed regions	**9,360.6**	**1,407.3**	**4,274.3**	**45.7**
Abruzzo	479.5	75.2	165.7	34.6
Molise	207.8	22.0	95.8	46.1
Sardinia	1,291.5	157.6	624.9	48.4
Total of the regions in transition	**1,978.7**	**254.8**	**886.4**	**44.8**
Basilicata	671.4	110.8	259.5	38.7
Calabria	1,089.3	152.1	548.6	50.4
Campania	1,812.5	256.3	715.0	39.4
Puglia	1,616.7	167.1	468.8	29.0
Sicily	2,184.2	288.9	869.4	39.8
Total of the less developed regions	**7,374.1**	**975.1**	**2,861.3**	**38.8**
NRDP: National Rural Development Programme	2,084.7	348.3	978.3	46.9
NRN: National Rural Network	114.7	24.1	46.8	40.8
Overall total	20,912.9	3,009.7	9,047.0	43.3

Source: MIPAAF.

Distribution of public expenditure by strategic priority (million euro), 2019



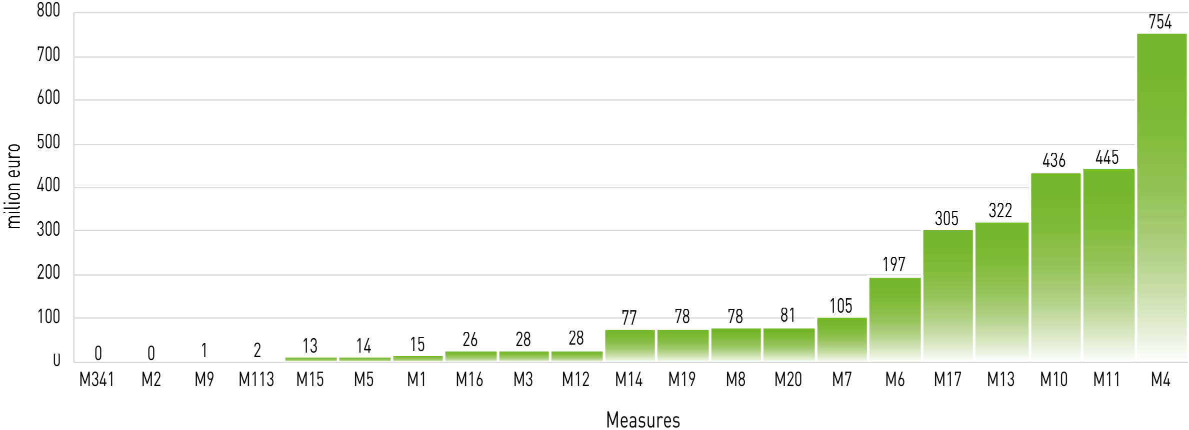
Source: MIPAAF.

and national programmes attributes to four RDPs only, PSRN, Sicily, Campania and Emilia-Romagna, 37% of the financial implementation.

The largest part (42.7%) of the public support paid relates to environmental and landscape interventions, and as such falls under strategic priority 4 "Preserve, restore and enhance ecosystems related to agriculture and forestry", followed by interventions under priority 2 "Enhance farm viability and the competitiveness of agriculture" with 22.9% and those under priority 3 "Promote food chain organisation, animal welfare and risk management" with 22.5%. The operations financed under priorities 6 and 5 were less significant, with payment volumes of 194 million euro and 153 million euro respectively.

Regarding the individual types of intervention that contributed to the 2019 expenditure result, measure M4 "Investments in tangible fixed assets" with 754 million euro alone represents 1/3 of the total disbursed public contributions. The so-called "premium" measures follow, together covering 43.5% of the total. In particular, measure M11 "Organic farming" (14.8%), measure M10 "Agri-climatic-environmental payments" (14.5%), measure M13 "Payments to areas subject to natural or specific constraints" (10.7%), measure M14 "Animal welfare"

Distribution of public expenditure by measure



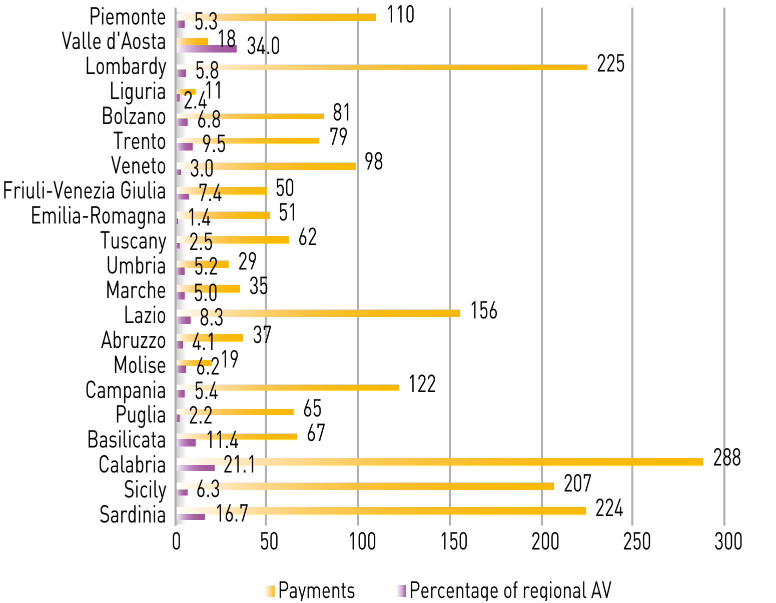
Source: MIPAAF.

(2.6%) and measure M12 "Natura 2000 payments and Water Framework Directive payments" (0.9%). Measure M17 "Risk management" decreased compared to the previous year (10.1%).

Analysis of the expenditure data relating to the regional budgets for 2018 identifies an overall payment amount of approximately 2 billion euro for the agricultural sector, essentially stable compared to the previous year . The Regions with the highest percentage of payments to the sector on the regional added value are Valle d'Aosta (34%), Calabria (21.1%), Sardinia (16.7%) and Basilicata (11.4%).
The analysis of expenditure by type of agricultural policy interventions, according to the consolidated classification adopted by CREA PB, shows that the largest share of total payments is for technical support and research and forestry activities, amounting to about 590 million euro and 473 million euro respectively, up compared to 2017 for technical support and down for forestry activities. Technical support and research account for 29% of the total expenditure, followed by forestry activities

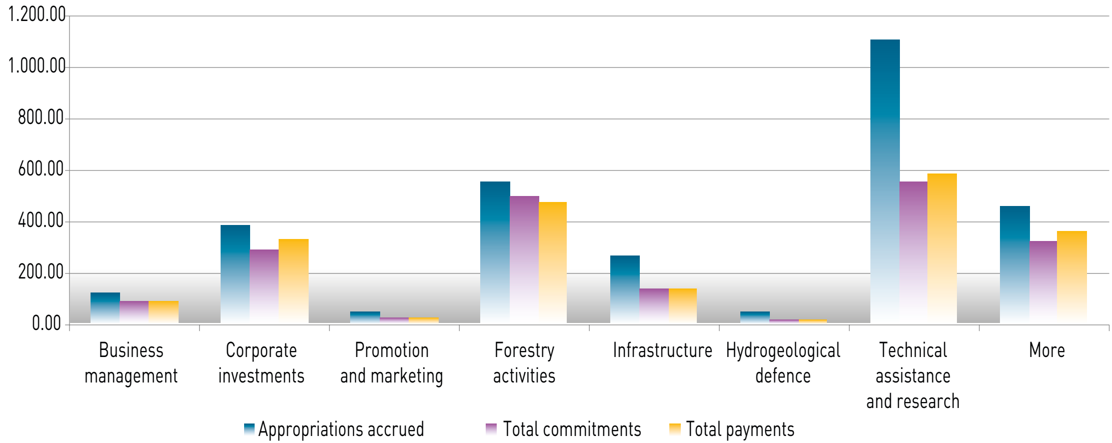
[1] *The data for Abruzzo and Basilicata are estimated.*

Payments to the agricultural sector (million euro). Incidence % of regional agricultural added value, 2018



Source: CREA Policy and Bio-economy Research Centre.

Agricultural funding by economic-functional purpose (million euro), 2018



Source: CREA Policy and Bio-economy Research Centre.

(23.2%), business investments (16.1%) and infrastructure support (6.7%), with different characteristics among the different Regions.

The weight of payments for the agricultural sector compared to overall budget payments for each Region shows how agricultural expenditure is somewhat modest and does not exceed the 5% threshold. The highest incidence is found in Calabria (4.9%), Basilicata (3.3%), Sardinia (2.6%) and the Autonomous Province of Trento (1.6%), while it is lower in several regions that play an important role in the national agricultural sector, such as Lombardy, Emilia-Romagna, Tuscany, Campania and Puglia.

During 2020, government action focused on managing the emergency and the repercussions of the Covid-19 health emergency in companies in the agro-food sector; therefore, starting in March, numerous legislative measures were issued to support the sector.

Budget law

Budget Law No.160/2019 has recited the following interventions for agribusiness:

a) Horizontal tax and contribution-relief measures
b) Enhancement of the supply chain, to increase competitiveness and transparency of contractual relations
c) Innovation with the reform of the tax credit for investments in technological innovation
d) Mutual support for female entrepreneurs in agriculture
e) Compensation for damage to farms caused by natural disasters and the establishment of a fund for deprived persons for the distribution of food products.

a) Horizontal agri-food measures

Fiscal measures

- Zeroing of agricultural IRPEF for agricultural entrepreneurs, partnerships, corporations and cooperatives, whose dominical and agrarian income from declared land does not contribute to the formation of the IRPEF taxable base and the relative additional taxes. For the year 2021, the same income contributes to the IRPEF taxable base to the extent of 50%;
- Tax credit for investments in capital goods, in research, development and technological innovation 4.0, for training 4.0 and for participation in international trade fairs;
- Criterion for the determination of the business income that agricultural floriculture entrepreneurs derive from activities aimed at the marketing of plants and floricultural products, calculated by applying a profitability coefficient of 5% to the amounts of transactions subject to registration for VAT purposes;
- Increase by 20%, in the three-year period 2020-222, of the portion of depreciation deductible from income taxes, against expenses incurred for investments in new plantings of multi-year tree crops, excluding costs related to the purchase of land.

Contribution exemption measures

- Exemption from the total payment of the contribution credit to the general compulsory insurance for invalidity, old age and survivors in favour of direct cultivators and professional agricultural entrepreneurs, under 40 years of age, with reference to new registrations in the agricultural social security system made during 2020, for a maximum period of 24 months.

b) Supply chain development measures for the agri-food sector

- Fund for the competitiveness of agricultural supply chains to support their development and investment with an initial budget of 15 million euro for 2020 and 14.5 million euro for 2021;

- Fund for the functioning of the Single National Commissions, at the Ministry of Agricultural, Food and Forestry Policies, with an endowment of €200,000 per year as from 2020, in order to promote price formation procedures and the transparency of contractual relations in agricultural supply chains.
- Fund for organic farming, with an endowment of 4 million euro for 2020 and 5 million euro per year from 2021.

c) Innovation measures for the agri-food sector

- Grant to agricultural companies of a non-repayable contribution (35% of eligible expenditure and subsidised loans not exceeding 60%) for technological innovation in agriculture;
- Fund for Innovative Investments by Agricultural Companies, with a budget of 5 million euro for 2020 at the Ministry of Economic Development.

d) Mutual support measures for the agri-food industry

- Bonus “women in the field”: granting interest-free loans to women farmers for the development or consolidation of the company. The loans are granted up to a limit of 300,000 euro, with a maximum duration of 15 years including the grace period. A revolving fund for the implementation of the bonus is established in the budget of the Ministry of Agricultural, Food and Forestry Policies (MIPAAF) with an initial budget of 15 million euro for 2020.

e) Compensation measures for the agri-food sector

- Fund for the distribution of food to the most deprived persons refinanced for 1 million euro per year for the three-year period 2020-2022;
- Interventions to compensate with the National Solidarity Fund with the extension of the time limit - from one to three years - and the increase of 40 million euro for 2020 and 20 million euro for each of the years 2021 and 2022 to compensate farms in the territories affected by the Asian bedbug.

Measures in favour of fisheries

- Reduction of the contribution relief for fishing shipowning companies, with reference to the crew, with the limit of 44.32% instead of 45.07% and an annual decrease of 0.4 million euro;
- Financing of the compulsory fishing ban with an increase of 2.5 million euro for 2020, with a limit of 11 million euro for 2021, and of the non-compulsory fishing ban.

Cura Italia: liquidity and support for workers and businesses

The first decree law, in chronological order, issued to address the health emergen-

cy was Decree No. 18 of 17 March 2020 “Measures to strengthen the National Health Service and economic support for families, workers and businesses, related to the epidemiological emergency from Covid-19”, called “Cure Italy”, in which for the agribusiness and fisheries interventions went in favor of liquidity for the supply chains and support to the workforce.
In order to increase liquidity, it is worth mentioning the Fund, with an endowment of 100 million euro for 2020, set up to deal with direct and indirect damages resulting from the current emergency and intended to ensure business continuity of agricultural, fishing and aquaculture companies.
For the workforce, the cassa integrazione in deroga was provided for all agricultural and fishing workers and protections for seasonal workers without continuity of employment relationships. The measure of the allowance is provided for fixed-term agricultural workers, who do not have a pension, who have performed at least 50 actual days of agricultural work in 2019. This allowance (for the month of March €600) does not contribute to the formation of income.

Liquidity: State guarantees for disbursement to companies in crisis due to Covid-19 emergency

Decree Law No. 23 of 8 April 2020 “Urgent measures on access to credit and tax compliance for businesses ...”, known as “Liquidity” provided specific actions for fishing and actions to promote liquidity to the agri-food sector.
For fisheries, rules have been included to simplify the procedures for liquidation of fisheries aid, just as the intervention of the Guarantee Fund for small and medium-sized companies (SMEs) has been extended, providing that the transitional measures introduced also apply to guarantees issued by Ismea in favour of agricultural companies. With regard to liquidity for the agri-food sector, the interventions of the Guarantee Fund for SMEs have been strengthened, with an increase in the percentage of coverage of the direct guarantee from 80 to 90% of the amount of each loan with a duration of up to 72 months, an increase in the Fund’s coverage in reinsurance from 90 to 100% of the amount guaranteed by the Confidi or other guarantee fund, and access to the Fund’s guarantee without the application of the creditworthiness assessment model.
The decree also extends, to food safety, the obligation to notify the Government - so-called golden power - in the event of the acquisition, by a party outside the European Union, of shareholdings of such importance as to determine the control of companies that hold goods and relationships of strategic importance for the national interest.

Relaunch: Reinforced support measures

Decree Law No. 34 of 19 May 2020 “Urgent measures on health, support for work and

the economy, as well as social policies related to the Covid-19 epidemiological emergency", known as "Relaunch", provided for compensation measures, establishment of emergency funds, mutualistic support and advantageous taxation in favour of the agri-food and fishing sector.
In particular, with regard to compensation, there was an increase of 10 million euro, for 2020, in the endowment of the National Solidarity Fund for agricultural companies located in the territories that have suffered damage due to the exceptional frost that occurred from from 24 March to 3 April 2020 for production without insurance policies (Article 222-bis).
As regards the funds, the one for the competitiveness of the agricultural supply chains has been implemented with 5 million euro for 2020, while the fund of 90 million euro for 2020 has been set up for supply chains in crisis in the livestock sector.
With regard to advantageous taxation, the redetermination of the purchase cost of land has been included, extending the right to redetermine the values of equity investments in unlisted companies and of land (both agricultural and building land) owned, on the basis of a sworn appraisal, provided that the value thus redetermined is subject to a substitute tax, the payment of which may be paid in instalments up to a maximum of three annual instalments of the same amount. The deadline for the payment of the first instalment, as well as the deadline for the preparation and swearing in of the expert report, have been postponed from 30 September 2020 to 15 November 2020.

Simplification: cutting red tape to help relaunch agriculture

The d.l. 76 of 16 July 2020 "Urgent measures for simplification and digital innovation" contains measures to simplify some administrative procedures concerning agribusiness. In addition, an extraordinary maintenance programme of the forest and mountain territory, irrigation infrastructures and water collection basins has been planned.
Among the various simplification measures, there is the provision for updating the SIAN so as to be able to identify agricultural parcels and business files through graphical and geo-spatial applications, and amendments to the legislation on coordinated checks on agricultural companies, including food and feed companies in the system.
The conditions for the granting of benefits to young people taking over the management of agricultural holdings have been modified, extending the possibility of requesting a non-repayable contribution in addition to soft loans at a zero rate.
Within 180 days from the entry into force of the decree (on 17 July 2020), an extraordinary programme for the maintenance of forest and mountain territory will be drawn up by the MIPAAF in agreement with the Ministry for the Environment and

the Ministry for Cultural Heritage and Activities.

Measures for supply chains and caterers

The d.l. 104 of 14 August 2020 “Urgent measures for supporting and relaunching the economy” introduced for the agri-food sector, the Fund for the catering industry, at the MIPAAF, with an endowment of 600 million euro for 2020 for contributions to catering operators who have suffered a certain loss of turnover. The businesses concerned are restaurants with food service, canteens and contract catering, farm catering, event catering and, limited to activities licensed to serve food, hotels. The Ministerial Decree of 27 October 2020 set out the criteria, disbursement methods and amount of the contribution.

Provision has also been made for the establishment of the Fund for the promotion of fourth range fruit and vegetables, with a budget of 20 million euro for 2020.

Ristori Decree

The d.l. 137 of 28 October 2020 “Further urgent measures on health protection, support for workers and businesses, justice and security, related to the Covid-19 epidemiological emergency” provides for a non-repayable contribution to be allocated to businesses in the economic sectors affected by the new restrictive measures which, as of 25 October 2020, have an active VAT number and declare that their main activity is hotel accommodation, catering and serving food and beverage. The essential condition is that the amount of turnover in April 2020 was less than two-thirds of that in April 2019.

In addition, non-repayable contributions are provided for agricultural, fishing and aquaculture businesses operating in the economic sectors affected by the restrictive measures introduced by the Prime Minister’s Decree of 24 October 2020 for an overall limit of 100 million euro for 2020.

In addition, the payment of the second 2020 IMU instalment has been abolished for properties and related appurtenances in which the business activities affected by the suspension ordered by the decree are carried out, and the exemption from payment of social security contributions for the month of November 2020 has been recognised for companies belonging to the agricultural, fishing and aquaculture sectors.

Finished printing in May 2021
by Tipografia Tiburtini s.r.l., via delle Case Rosse, 23, 00131 Rome

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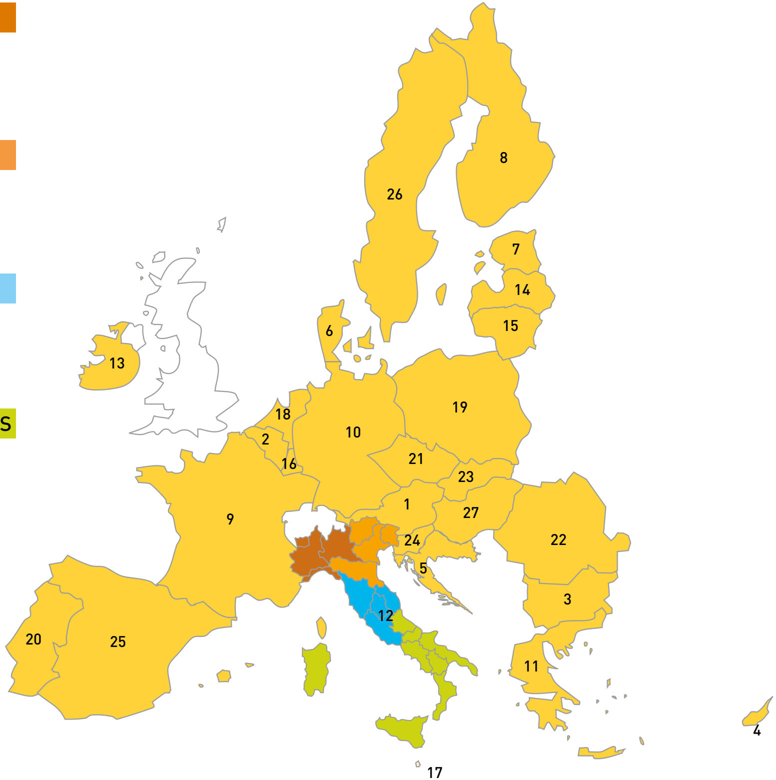

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ISBN 9788833851082