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TREND OF THE AGRICULTURAL ECONOMY | YEAR 2018

Agriculture: in 2018 + 0.6% production and + 0.9% value added, but margins are falling

Consistent growth for wine (+ 16.2%), moderate for fruit (+ 2.3%) and vegetables (+ 1.2%). The production of olive oil collapsed (-34.7%) and the citrus fruit production dropped (-4.0%). The weight of agriculture on the entire economy was 2.1%; including the food industry, it got to 3.9%. Employment grew by 0.7%.

In the EU28, production increased (+ 0.6%) and agricultural income fell (-3.8%). Italy confirmed itself as the first European country for value added in the sector and the second for production value.

59.3
billion euros
The value of agriculture, forestry and fishing production in Italy

+1.8%
The value added (by volume) of the agri-food sector

+0.6%
Agricultural production in the EU28

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The agricultural sector is recovering, the agri-food industry continues to grow

The data presented in this Report are part of the National Accounts for Agriculture and provide a general overview of the sector's activity in 2018. The first part presents the economic results of the agriculture, forestry and fishing sectors and general information on the progress of the agri-food sector, which includes the food industry. In the second part the performance of agricultural companies in the strict sense is complemented by the economic results of agricultural cooperatives producing wine and olive oil. The results of this "enlarged" agricultural sector are shown in the Account Satellite of Agriculture, drawn up according to a pattern shared by all the EU countries28 in order to produce a homogeneous basis for international comparisons[1].

After a strongly unfavorable 2017 (-3.9% value added in volume), the agriculture, forestry and fishing sectors registered a slight recovery in 2018: by volume, production increased by 0.6% and value added 0.9%. Agriculture in the strict sense recorded an increase of 0.6% in the volume of production and 0.8% of value added. Positive signs emerged for forestry, with a significant increase in both production (+ 1.5%) and value added (+ 1.7%). The result of the fishing sector was less favorable, and production grew by 0.5% while value added remained substantially stable (+ 0.1%).

The expansion of the value added for food, beverage and tobacco industries was robust, with an increase of 2.7% in volume and 2.9% expressed in current prices. The agri-food sector complex, which includes agriculture, forestry and fishing together with the food industry, had thus marked a growth in value added by 1.8% in volume and 1.3% at current prices. The sector generated 3.9% of the value added for the entire economy, a sum of 2.1% of the primary sector and 1.8% of the food industry.

In 2018, employment in the agriculture, forestry and fisheries sectors, measured in Labor Units (AWUs), increased by 0.7% compared to the previous year, a total of 2.5% growth in the component of the employment and a decrease of 0.2% of the self-employment. Thanks to the positive trend of the food industry (+ 1.2%), the labor input of the agri-food sector recorded an increase of 0.8%.

Income from employment in agriculture, forestry and fishing increased by 4.2%; in particular, gross wages rose by 4.0%. Gross fixed investments in the sector recorded a significant increase (+ 4.1% in current values and + 2.5% in volume).

AGRICULTURE: KEY NUMBERS. Production and value added. Changes in volume, price and value. Year 2018, current values in million of euros and percentage values

ECONOMIC ACTIVITY	Current millions of euros Year 2018	% Changes of volume 2018/2017	% Changes of price 2018/2017	% Changes of value 2018/2017
Production of agricultural goods and services	52.176	+0.6	+1.1	+1.7
- Herbaceous crops	29.074	+1.3	+3.3	+4.6
- Livestock breeding	16.245	-0.6	-2.2	-2.8
- Agricultural support activities	6.857	+0.4	0.0	+0.4
Secondary activities (*)	3.703	+1.0	+1.5	+2.5
Agriculture production	**55.879**	**+0.6**	**+1.1**	**+1.7**
Value added of agriculture	**30.735**	**+0.8**	**-1.1**	**-0.2**
Forestry production	**1.645**	**+1.5**	**+1.4**	**+3.0**
Value added of forestry	**1.384**	**+1.7**	**+1.6**	**+3.4**
Fishery production	**1.738**	**+0.5**	**+2.1**	**+2.6**
Value added of fishing	**952**	**+0.1**	**+1.2**	**+1.3**
Agriculture, forestry and fishing production	**59.262**	**+0.6**	**+1.1**	**+1.8**
Value added of agriculture, forestry and fishing	**33.070**	**+0.9**	**-0.9**	**0.0**

(*)These are non-agricultural secondary activities carried out within the agricultural sector (mainly: agro-tourism, processing of milk, fruit and meat, production of renewable energy), net of secondary agricultural activities carried out by non-agricultural sectors (essentially related to crops and to farms and exercised, for example, by commercial enterprises).

Wine boom and olive oil production collapse

The best performing agricultural product in 2018 was wine. Its production grew by 16.2% in volume and 31.5% in value, with a marked increase in production prices essentially linked to the improvement of quality. This sector was increasingly characterized by high quality products: more than 500 Dop / Dopg and Igp wines certified by the European Union represented 90% of the production value.

With 10.2 billion euros of wine production value, Italy in 2018 ranked second in Europe only to France, which produced 12.6 billion. 88% was produced by farms (42%) or by agricultural cooperatives (46%), only 12% by industry. Wine exports exceeded 6 billion euros.

The result was also good for industrial crops, fodder and flower crops, cereals and vegetables. A decrease was instead recorded for citrus fruit production and, to a lesser extent, for livestock production.

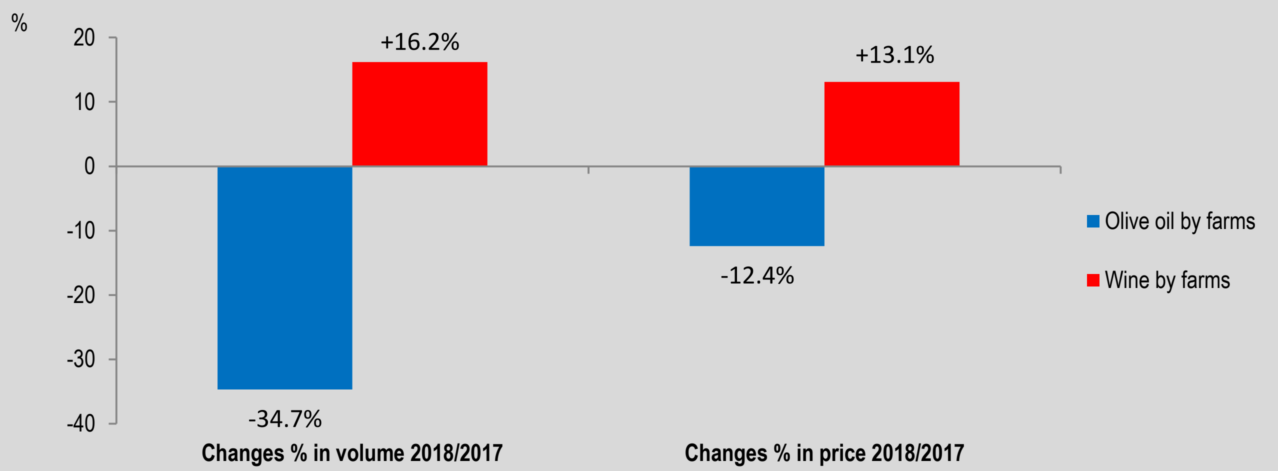
As for fruit production, the strong recovery in apple production (+ 25.6%) should be noticed. It almost completely recovered the contraction of 2017 (-28.8%), the year that has recorded the worst result since 1980 .

On the other hand, the production of olive oil showed a sharp reduction to the previous year (-34.7%), with the highest fall in Puglia (-48% in value and -43% in volume). The production crisis is attributable, in particular, to adverse weather conditions (spring frosts and summer drought), the further spread of xilella and the presence of oil fly attacks. These two problems heavily affected production, amplifying the alternation between years of charge and discharge[2].

Climate change over the last decade has affected the profitability of the agricultural sector. Collection losses due to natural disasters have taken on a recurring character in recent years. Various productions were involved, for example wine in 2017 (-16%) and in 2014 (-8.9%), maize in 2015 (-22.2%) and in 2012 (-19.4%), olive oil in 2016 (-39.5%) and in 2014 (-39.3%), potatoes in 2013 (-12%) and in 2010 (-13.4%), durum wheat in 2017 (-16.4%) and in 2009 (-29.4%), peaches in 2018 and (-11.9%) and in 2017 (-13.7%), apples in 2017 (-21.6%) and in 2012 (-14.6%). The centrality of this issue was also recognized at EU level in the definition of the new lines of the Common Agricultural Policy (PAC) after 2020.

As far as prices are concerned, trends have been very different. In 2018 there were significant increases in production prices for fodder crops (+ 18.9%), viticulture (+ 13.2%) and fruit (+ 10.4%), more content for cereals (+ 2.9%). Decreases, on the other hand, affected the prices of olive production (-10.6%), industrial crops (-5.8%), vegetables (-3.9%), citrus fruits (-3.5%) and of livestock production (-2.2%).

FIGURE 1. PRODUCTION OF OLIVE OIL AND WINE BY FARMS. PERCENTAGE CHANGES IN VOLUME AND PRICE (DEFLATOR). Year 2018



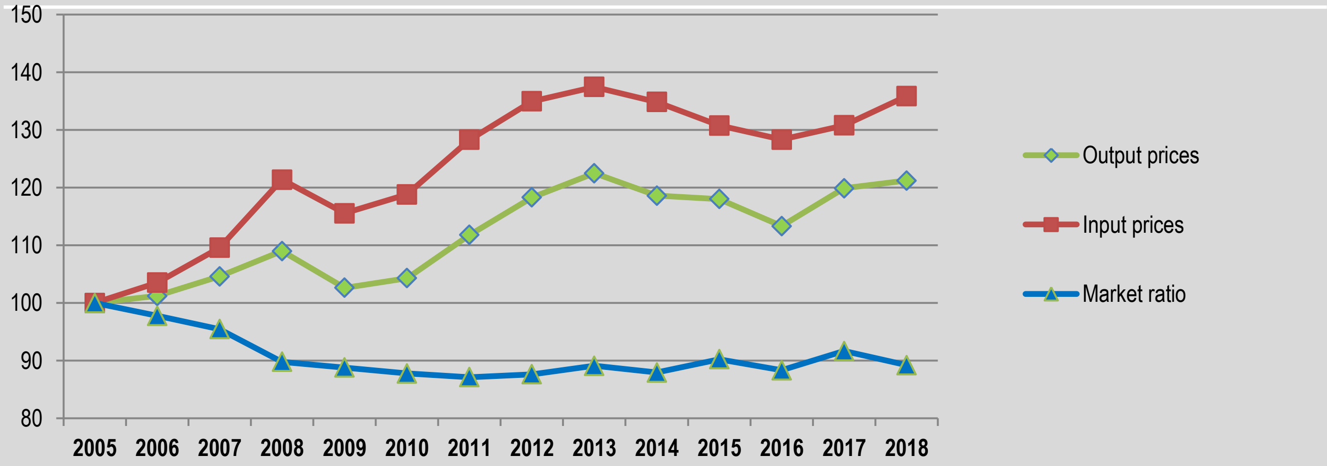
Relative price trends affected agriculture

An important aspect of the evolution of the agricultural sector concerns the relative trends of production prices and intermediate consumption (ie. the costs of the sector) measured by means of the respective deflators.

Taking a very long period as reference (2005-2018), producer prices rose less than half to those of purchased inputs, due to increases in the prices of fertilizers, motive power and feed. This generated a gap between the dynamics of input prices and output of more than 22 percentage points, which led to a contraction in the profit margins of the producers in the sector. The implicit value added deflator recorded a decline between 2005 and 2011, a short and limited rise in 2012-2013 and a new decline in recent years.

In 2018 the prices of sold agricultural products increased by 1.1% only while those of intermediate inputs grew much more significantly (+ 3.9%), with a large gap in favour of the latter. This trend was common at European level: for the EU28, output prices increased by 0.6% and those of input by 3.8%.

FIGURE 2. AGRICULTURE: TREND OF OUTPUT PRICES AND INPUT PRICES AND MARKET RATIO. Base index numbers 2005=100



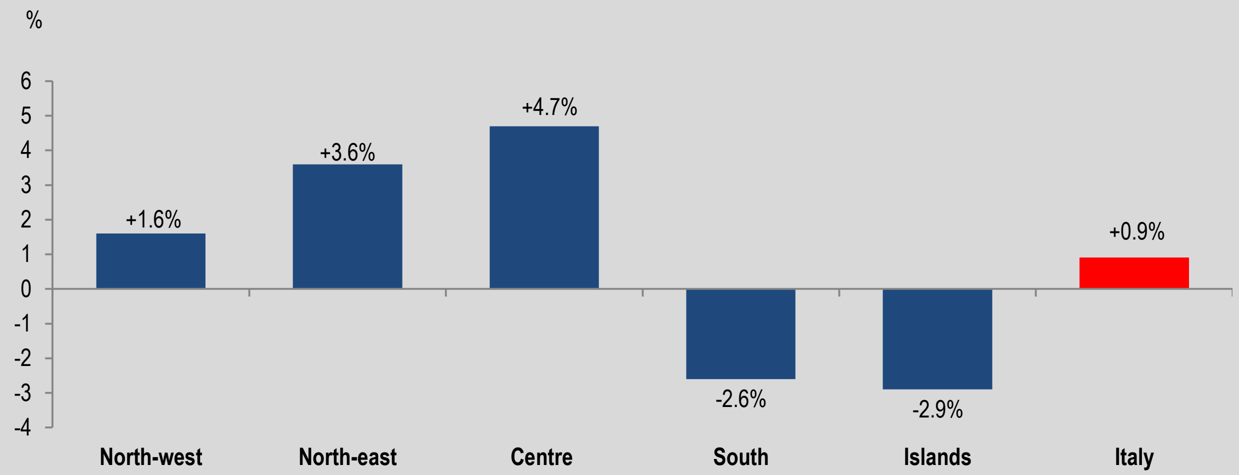
Good performances in the territories of the Center-North, not in the South and Islands

Provisional estimates on the agricultural sector as a whole at territorial level indicated, in 2018, an increase in the volume of production in almost all areas of the country. In the Center, the most affected area in 2017, the previous decline was recovered, with an increase of 3.2%. Also in the North there was a recovery, with an increase in production of 2.2% in the North-East and 1.6% in the North-West. In the South, which in 2017 was the only growing area , the trend was the opposite, with a decrease of 2.4% in 2018. For the Islands the negative trend was confirmed with a drop of 1.7%. In terms of value added, the performance by geographical area is shown in figure 3.

Regions that showed the most positive results in terms of production volume and value added were the autonomous province of Trento (+ 19.1% and + 25.9%), Lazio (+ 4.3% and +6.7%), Umbria (+ 3.7% and + 6.7%), Toscana (+ 3.7% and + 4.9%) and Veneto (+ 2.3% and +4.4 %). The most negative results were recorded in Calabria (-9.4% for production volume and -12.1% for value added), Molise (-2.6% and -2.3%), Sicilia (-2.6% and -4.2%) and Puglia (-1.0% both in terms of production volume and value added).

Prices, measured by the production deflator, moderately grew, with a marked increase only in the autonomous provinces of Trento and Bolzano (increases above 9.0%). Decreases in producer prices mainly concerned Lazio (-3.1%), Calabria (-2.6%) and Liguria (-1.6%).

FIGURE 3. VALUE ADDED IN AGRICULTURE, FORESTRY AND FISHING BY GEOGRAPHICAL AREA. Year 2018, percentage changes in volume



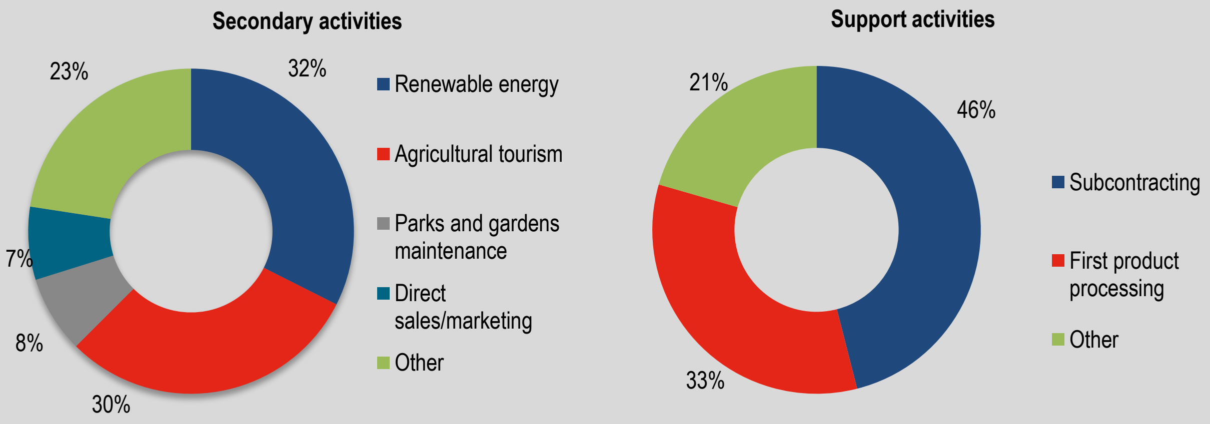
Agriculture in Italy is increasingly multi-functional

In our country the agricultural sector is characterized by a growing multi-functionality that meets the need of companies to improve their competitive position: in 2018 the value of production achieved by secondary activities and support activities reached almost 21% of the total agriculture.

The total value of secondary activities and support activities has increased over the past few years, passing from 6.3 billion euros in 2000 to around 11.5 billion in 2018. Renewable energy production (photovoltaic, biogas, biomass) made up 32% of all secondary activities, followed by agritourism (30%). The value of secondary agricultural activities exceeded by 4.6 billion euros in 2018, of which over 1.3 billion from rural tourism (including recreational and social activities and educational farms) and 1.5 billion from renewable energy, divided as follows: 63.4% by photovoltaic, 7.2% by biogas from animal excrements and 29.4% by biomass from agricultural and forestry activities.

Among the support activities (whose value reached almost 6.9 billion in 2018) the "Agricultural activities for third parties" (sub-contracting) valued over 3 billion euros, the "First processing of agricultural products" (excluding processing) valued around 2.3 billion euros. The latter includes calibration, washing, packaging for the market, range IV processing, etc., all these activities in the recent past were carried out on a commercial level while now they are typical activities of farms, carried out after product collection.

FIGURE 4. SECONDARY ACTIVITIES AND SUPPORT ACTIVITIES OF AGRICULTURE. Year 2018, percentage composition



The value added of Italian agriculture at the top of the European ranking

So far according to the available provisional data , in 2018 the agricultural sector, as represented in the Satellite account of agriculture, recorded an increase in production volume by 0.6% for all 28 EU countries. The most significant growth was recorded in Romania (+ 11.0%) and Spain (+ 6.6%) and the trend was also positive for Italy (+ 1.5%) and France (+ 1.2%). On the other hand, production significantly dropped in Denmark (-3.8%), Greece (-3.6%) and Germany (-3.1%).

Price growth (measured in terms of base price) was 0.6% for the European Union as a whole. More marked increases were recorded in France (+ 3.4%), the United Kingdom (+ 2.8%), Romania (+ 2.7%) and Italy (+ 1.5%).

The A farm income indicator[3], which measures labor productivity in agriculture, has suffered a 3.8% decrease at EU28 level, with particularly large declines for Denmark (-46.2%), Germany (-23.2%) , Poland (-13.0%), the Netherlands (-11.3%) and the United Kingdom (-8.9%). The dynamics of the indicator was instead positive for France (+ 9.9%), Spain (+ 3.7%), Italy (+ 3.6%) and Romania (+ 0.6%).

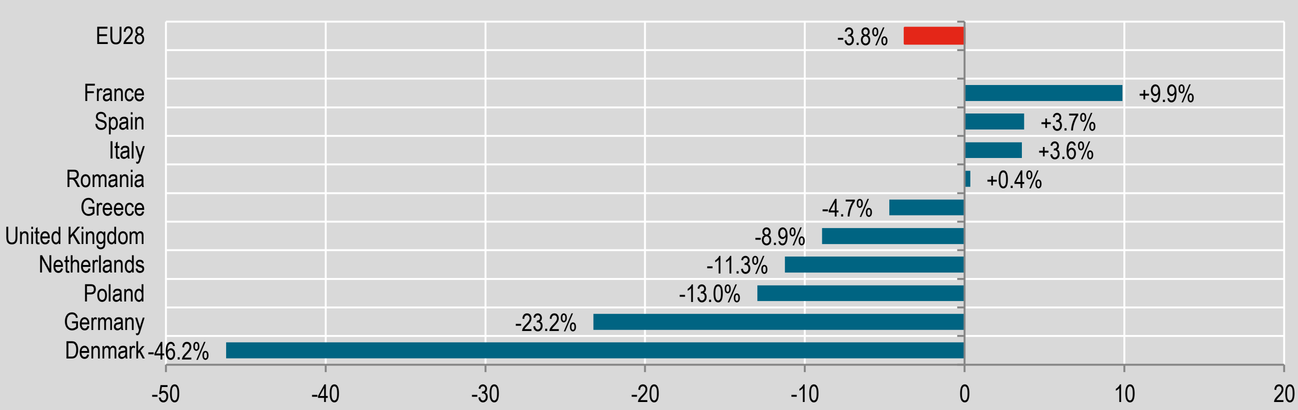
2018 was characterized by different production volume trends compared to 2017. Spain and Italy regained ground (+ 8.3% and + 2.8% respectively) after having recorded a significant decline in 2017. The performance was positive also for France (+ 1.7%) while negative results included Germany (-10.8%), the United Kingdom (-5.9%), Poland (-3.4%) and the Netherlands (-2, 2%). Wine-growing has shown consistent growth in all producing countries, above the contraction of 2017.

On the other hand, olive oil production sharply dropped (-18% in the EU28 overall), above all because of the collapse of Italy (-36.9%) and Spain (-7.4%). Cereal crops recorded consistent growth in Spain (+ 43.1%) while fruit showed a positive trend thanks to the performance of Spain, Italy and some emerging countries in the sector such as Poland and Germany.

Italy, with a value added of agriculture of 32.2 billion of current euros,, in 2018 continued to lead the European ranking after France alone, in terms of production value.

FIGURE 5. INDICATOR OF AGRICULTURAL INCOME FOR EU28 AND THE MAIN EUROPEAN COUNTRIES
Year 2018 (Annual percentage changes)

%



The production subsidies received by the agricultural sector, amounting to 51.4 billion euros for the EU28 in the last year, were provided by both the national public administrations and European bodies. Considering the absolute amounts, France ranked first with 7.8 billion, followed by Germany with 6.8, Spain with 5.8 and Italy with 4.9. These grants represent a very high share of the value added of the sector in Germany (40.7%), in the United Kingdom (34.9%)%, in Poland (34.8%), France (24.3%) and Spain (19.1%) while in Italy they accounted for 15.3%.

NOTE

1 For further details, see the "Methodological note"

2 In olive growing, generally, with a year of abundant production (so-called of charge) followed by a scarce production (called discharge). This phenomenon of alternation of production is sometimes repeated for several consecutive years with a relative constancy and is genetically determined, even if its intensity is influenced by the variety, the amount of fruiting of the previous vintage, the climatic-environmental conditions and the cultivation techniques and pruning

3 See the Glossary

Glossary

Secondary activities of agriculture: activities of production of non-agricultural goods and services (ie not belonging to the Nace codes 01, 02 and 03) carried out within the agricultural sector or referable to it (mainly agritourism, milk processing, fruit and meat, renewable energy production),

Support activities for agriculture: activities related to agricultural production, not aimed at the collection of agricultural products, carried out on behalf of third parties. Activities that follow the harvest, aimed at preparing agricultural products for the primary market are included as well. Agriculture support activities are identified with code 01.6 in the Classification of economic activities Ateco 2007 (derived from the Nace Rev.2).

Deflator: is the ratio between an aggregate expressed in nominal terms and the same expressed in real terms. It indicates how much of the growth of the aggregate, expressed in nominal terms, is attributable to price changes.

Agricultural income indicator: is the so-called indicator A, defined by Eurostat as the value added at the cost of factors in real terms of agriculture per unit of work. The deflator used is that of GDP.

Base price: is the measure of the actual amount received by the manufacturer. It includes contributions on products and excludes product taxes and any trade and transport margins separately invoiced by the manufacturer.

Market ratio: in this context, the market ratio of agriculture is measured by the ratio between the index of producer prices of agricultural products (output) and that of intermediate consumption prices (input) for domestic producers.

Income from employment: is the cost borne by employers as remuneration for the work performed by workers employed by them. The aggregate of compensation of employees includes both gross salaries and social contributions, be they actual and/or figurative.

Gross salaries: include salaries, salaries and ancillary skills, in cash and in kind, gross of tax and social security deductions, paid to employees directly and on a regular basis, as established by contracts, company agreements and legal regulations in force.

Labor Units (Ula): are a measure of employment with which part-time jobs (part-time work contracts and second activities) are reported in full-time work units. The work units are calculated net of the redundancy fund.

Value added at basic prices: it is the difference between the value of the production of goods and services and the value of the intermediate costs incurred for this production. Production is valued at basic prices, ie net of taxes on products and gross of product subsidies and intermediate costs at purchase prices. Corresponds to the sum of production factors and depreciation.

Chain-linked values: are the measure in volume of the national accounting aggregates that allow to represent the real dynamics of the economic quantities net of the price Changes. For each aggregate and for each year the ratio between the value expressed at the prices of the previous year is calculated (for example the estimates for 2009 are expressed at 2008 prices) and the current value of the aggregate referred to the previous year. The volume indices on a mobile basis thus obtained are then reported to a fixed reference base (currently 2010) giving rise to chain-linked volume indices. Multiplying these by the current value relating to the reference year we obtain the aggregate in chain-linked values.

Methodological note

The Economic Accounts of Agriculture

The Economic Accounts of Agriculture (CEA) provide an overview of the activity of the sector. From the agricultural accounts derive economic trends by product, changes in basic prices and production volumes by product groups and by production sector. The data are processed according to the methodologies established by the European system of national and regional accounts (Sec 2010) and concern economic aggregates such as production, intermediate consumption, value added and agricultural income. The data has a high level of detail, both territorial and product.

The methodology used complies with the guidelines recommended by Eurostat.

In this Report the data relating to the central framework of the National Accounts are presented and analyzed in the first part, while in the second part those relating to the Account Satellite of Agriculture prepared for Eurostat international comparisons (Eu28). The two accounts present some differences: the Agriculture Satellite Account does not include the activities of family gardens, small farms and some service activities while it provides information on the inclusion, among agricultural activities, on the production of wine and olive oil processed by cooperatives (which, instead, is not included in the National Accounts as it is attributed to the beverage industry). In the case of wine, for example, the economic value of production is divided into Ateco 01.21.00 (cultivation of grapes and production of wine from own grapes) and Ateco 11.02.10 (production of table wine and quality wines produced in specific regions) where wine cooperatives and wine industry are included.

The value of agricultural production

For the definition of the production value, the "quantity by price" method is used. It is obtained by multiplying the quantities of the products by their average annual unit price. This method provides the completeness of the estimates as more than 170 products and activities covering the entire production of the agricultural sector are considered. Calculation procedures are extremely detailed and include every type of product at the 4-digit level of the Nace Rev.2. The quantities are detected starting from the survey "Estimation of surfaces and production of agricultural crops": the survey includes details at provincial level and measures the surveyes the invested areas , the average yields per hectare, the total production and the collected production and complies with the European Regulation 543/2009. Prices are collected through a specific survey called "Monthly survey of producer price of products sold by farmers" with details for each province; the survey takes into account the seasonality of productions and excludes imported products. The recorded average prices (to the producer) are then increased by any contributions and adjusted with taxes on products, thus obtaining the basic prices. Using the basic prices, the "quantity by price" method enables to have the production value for each product. For other types of production, such as farms, the quantities (which also take into account ongoing production) are derived from specific surveys of a corporate nature: the most relevant are those on slaughterhouses for butchered meat and that on dairy farms for the conferment of milk to the dairy industry. This information makes it possible to extend the quantity by price method to the evaluation of livestock production.

A similar consideration concerns the estimates of other production aggregates such as secondary activities and support activities. For example, in the estimates of the agritourism the surveys on presence and flows in agritourism companies and on the movement of customers in hotel facilities are taken into account; these estimates are then compared with the evaluations of the sector organizations and with the VAT declarations of the agricultural sector. Another example concerns the production of electricity from renewable sources (photovoltaic, biomass, biogas) which is estimated starting from the data relating to the energy produced expressed in KW / h for the main sectors of economic activity (agriculture, industry, services) taken over by the Energy Services Manager (GSE). The quantities of energy produced by the agricultural sector are then valued through the average sale price including any aid.

The intermediate consumption of agriculture

The estimate of intermediate consumption of the sector is processed through a methodology attributable to the "quantity by price" approach. In addition to the consolidated cost components (for example technical means such as feed, fertilizers, seeds and phytosanitary), new types of farm costs such as insurance for structures and animal husbandry, bottling, marketing of the wine produced on the farm, packaging related to the first processing of the products and preparation for the markets, routine maintenance for photovoltaic systems and biogas plants, maintenance of parks and gardens, other minor expenses related to farm tourism and related activities and finally the expenses related to other support activities have been included. The used sources range from specific surveys on technical means, to the monthly survey on prices of products purchased by farmers, and to the Rica-Rea sample survey, which provides basic microeconomic information on farms and includes a specific questionnaire section on costs.

The value of forestry and fishing production

The production of forestry is calculated with the quantity approach by price of the wood cut type (for work use or for energy use). With the Nace Rev.2 classification, the evaluation of the harvest of vegetables and fruit trees from the woods previously associated with agriculture was added. Industry estimates were also affected by the revaluation of support services (Ateco 02.20.00) through the processing of administrative data of the VAT returns of the forestry sector. Finally, regional forestry companies (Ateco 02.40.00) were included. They were previously classified in the Public Administration sector. The activity of regional forest companies, oriented to the preservation of parks and woods, expanded the field of forest support activities with a more oriented attribution towards services related to production.

Fishing production is also calculated using the quantity by price approach. The quantities of fish caught (fish, mollusks and crustaceans), from Irepa (now Mably), are supplemented with further estimates to ensure the exhaustiveness of the phenomenon. The quantities of aquaculture production is provided by the specific survey carried out by the Ministry of Agriculture, Food and Forestry and Tourism (MIPAAFT). All quantities are valued with the respective average prices. The sector estimates were also affected by the revaluation of support services (Ateco 03.11.00) deriving from the administrative data of the fisheries sector VAT returns.

References

More detailed data from the 1980-2018 time series are available on http://dati.istat.it/, under the theme "National Accounts" / "Accounts of the branch of agriculture, forestry and fishing".

News and in-depth information on "News in agricultural accounts - The revision of the national and regional accounts of agriculture and the changes made with the introduction of the Sec 2010" are available at:http://www.istat.it/it/archivio/162712.

Information on national accounts (annual and quarterly) and on institutional, territorial and environmental accounts is available at: http://www.istat.it/it/conti-nazionali.

Detailed data at European level are available at http://ec.europa.eu/eurostat/data/database, under the theme “Agriculture, forestry and fisheries”/“Agriculture”/“Economic Accounts for Agriculture”.