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AGRICULTURE IN ROMANIA

Activity “Studies of international trade of agricultural and connected products
in the participating countries” (A.T1.1, D.T1.1.1)

Association of Cross-Border Cooperation “Lower Danube Euroregion”

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Abstract

"BRIDGES OF TRADE" (eMS ENI Code BSB 861) is a project funded under Programme Black Sea Basin 2014-2020, Priority 1 - Promote business and entrepreneurship within Black Sea Basin, Specific Objective 1.2 - Increase cross-border trade opportunities and modernization in the agricultural and connected sectors through European Neighbourhood Instrument.

The present work is elaborated under the Activity "Studies of international trade of agricultural and connected products in the participating countries" (A.T1.1, D.T1.1.1) and will highlight which are the main agricultural and connected products offered and demanded by each country so that the sectors of the potential beneficiaries can be easily identified.

The "BRIDGES OF TRADE" project aims at bridging this gap and help producers of those sectors develop trading links with importers from the partners' regions.

"BRIDGES OF TRADE" is expected to have a springboard and multiplier effect as is shown in the Application:

- ✚ The SMEs created transnational trade links will, from the one hand, maintain and expand their links and, from the other hand, will act as role models in their areas;
- ✚ The TRADING BRIDGES NETWORK will keep supporting the extroversion of the agricultural SMEs and motivate them to undertake the relevant initiative;
- ✚ The ICT based training tool will be available to all SMEs to facilitate their efforts to be active in international trade.

It is very important to emphasize that the present study is an instrument to raise awareness about national strategies and policies that are implemented in the agriculture and livestock sectors by this time and to contribute to the development and the competitiveness of our regions in the agriculture and livestock domains by increasing sustainably the production, that will lead to increased export, the productivity, and add value with innovation component.

1. Agriculture design in the partner countries: Romania

1.1 Geographical position and boundaries

Being located at the border of the Balkan Peninsula and covering an elliptical area of 238,391 km, Romania occupies much of the lower Danube basin and the eastern regions of the middle basin of this river. It is located both south and north of the Carpathian Mountains, which form the natural barrier between the Danube basins.

Romania's borders are as follows:

-  North: Ukraine
-  West: Hungary
-  Southwest: Serbia
-  South: Bulgaria
-  Southeast: Black Sea
-  East: Republic of Moldova






In terms of its size, Romania is an average country in the EU 27 (5.41% of the EU 27).

The territory of Romania includes 5 biogeographical regions as Steppe, Pontic, Pannonian, continental and alpine, out of the 11 in Europe.

Of the total area of the country, about 87.1% represent the rural area formed by communes, as administrative units together with the component villages.

The distribution on Romania geographical areas is balanced: 33% of the plain area (up to 300 m altitudes), 37% the hilly area (300 - 1000 m) and 30% the mountain area (over 1000 m altitude).

According to the Nomenclature of Statistical Territorial Units (NUTS), the territorial structure of Romania, assimilated to NUTS, is:

-  NUTS I: Romania;
-  NUTS II: 8 development regions, with an average population of 2.67 million inhabitants per region;
-  NUTS III: 42 counties, which reflect the administrative-territorial structure of the country;
-  NUTS IV: not used, as associations of territorial units have not yet been made;
-  NUTS V: 320 municipalities and cities, 2,861 communes with 12,957 villages¹.

¹ Programul Național de Dezvoltare Rurală pentru perioada 2014 - 2020

2. Agriculture design in Romania

What is it...

Agriculture is defined as a branch of the material and results in farming and animal husbandry.

Romania is a traditional agricultural country and plays a unique and important part of European agriculture. The soil is fertile and the climate is favourable for agriculture, animal husbandry and horticulture. With a total area of 238,000 sqm, Romania is one of the countries with the most pronounced agrarian profile in the European Union. Having about 15 million ha of farmland, of which more than 9 million ha devoted to arable crops, Romania owns almost 1/3rd of the total agricultural lands in the EU (33,5% of all EU farms - EU Commission updates, April 2017). Thus Romania could be the second-largest producer of agricultural products in the CEE region².

Agriculture in Romania has a value of approx. 5% of the gross domestic product and gears approx. 30% of the active population employed at national level. Agriculture represents 5% of the country's GDP in 2019.

Romanian nowadays agriculture, in generic terms, is structured as follows:

- ✓ **Aquaculture**, which deals with the growth of plants and animals that live in water, especially in the seas and oceans;
- ✓ **Agrophyto technics**, which deals with the cultivation of field plants, fodder plants and technical plants;
- ✓ **Beekeeping**, a field that deals with beekeeping to obtain honey and wax, also having the important role of pollination of plants in the beekeeping area;
- ✓ **Poultry farming**, a field of agriculture that deals with poultry farming;
- ✓ **Horticulture**, which deals with the selection and growth of vegetables, fruit trees, vines, fruit and decorative shrubs, flowers, ornamental plants, tropical plants and greenhouse plants;
- ✓ **Mollusc culture**, which deals with the growth of molluscs, both terrestrial, such as edible snails, but also aquatic molluscs, such as shells;
- ✓ **Fish farming**, which deals with raising fish in different conditions, but also the industrial system;
- ✓ **Sericulture**, which deals with the growth of silkworms;
- ✓ **Forestry**, which deals with the study, growth, exploitation and protection of trees that form forests, control and protection of forest fauna and flora;
- ✓ **Animal husbandry**, a field that deals with raising domestic animals, more precisely domesticated land mammals, to obtain milk, meat, wool and skins or furs.

²

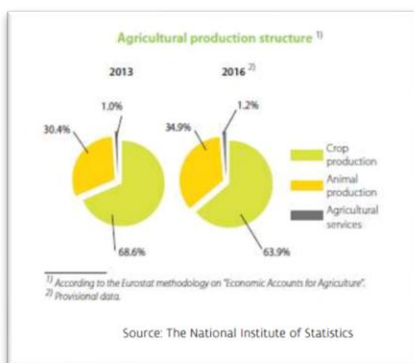
https://www.flandersinvestmentandtrade.com/export/sites/trade/files/market_studies/2017_Agriculture_Romania.pdf

Other sectors in Romania that are developed could be considered Algaculture, Arboriculture, Bulbiculture, Caniculture, Cypriniculture, Columbiculture, Conch shell culture, Rabbit farming, Floriculture, Heliculture, Vegetable growing, Liniculture, Mariculture, Mussel farming, Oyster farming, Fruit growing, Salmon farming, Spongiculture.

Agriculture in Romania is one of the important branches of the Romanian economy and is constantly expanding. The contribution of agriculture, forestry, fish farming in the formation of the Gross Domestic Product is around 6% of GDP, and in the EU member states, it is around 1.7%.

Within a geographical, administrative and socio-economic predominantly rural space, agriculture has been and continues to be a sector of prime importance in Romania, almost 66% of Romanian territory being taken up by agriculture with 46% of the population living in predominantly rural regions (EU Commission updates, April 2017).

At the same time, the sector's contribution to the economy and the share of employment plays a significant role in the overall Romanian economy.



The biggest production in Romania is determined by crops (up to 70%), followed by animal production (\pm 30%) and agricultural services (\pm 1%).

Traditional agriculture in Romania (crops and animal growing) has an upward path. The main agricultural products in Romania are wheat, corn, barley, sugar beet, sunflower seeds, potatoes, grapes, pork, poultry, milk, wool and eggs.

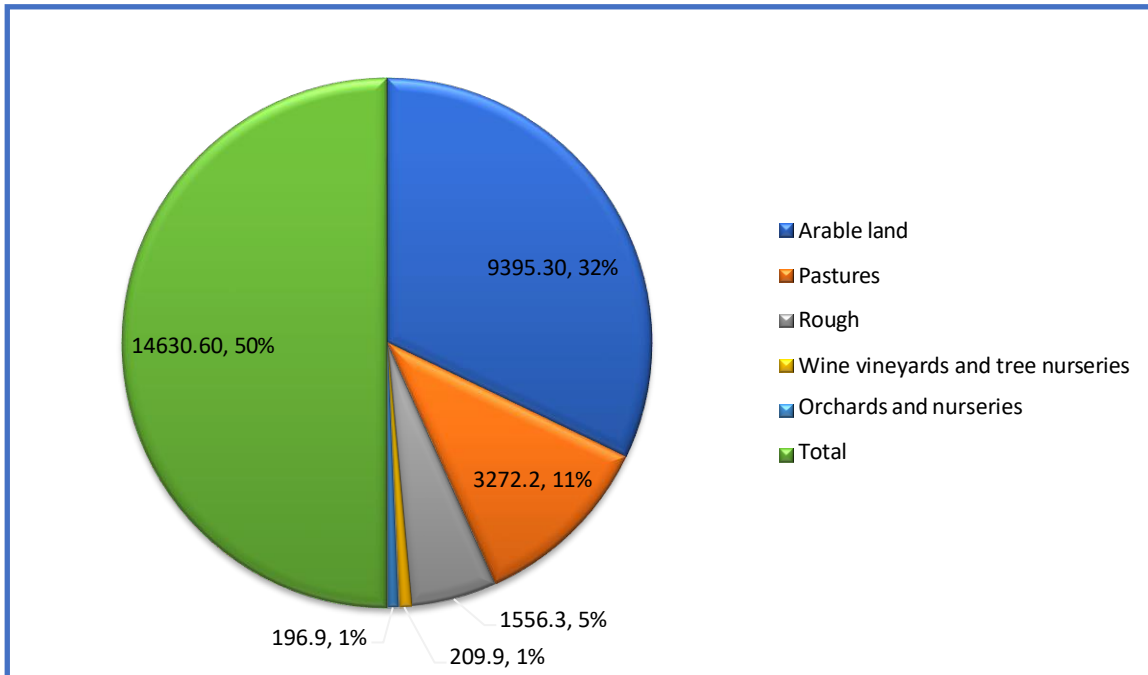
From 2017 to 2019, the Statistics (Table below³) are announcing an upgrowing trend for the sector:

Main figures - Year 2019		
Population (1 st January)	19 414 458	persons
Area*	238 398	km ²
Currency	RON	leu
Nominal GDP at current prices	223 335	million EUR
GDP per capita at current prices	11 504	EUR
GDP per capita at purchasing power	21 579	PPS
Harmonised index of consumer prices	3.9%	change over previous year
Unemployment rate	3.9	% of labour force
Exports (goods & services)	90 119	million EUR (current prices)
Imports (goods & services)	98 733	million EUR (current prices)
Balance (goods & services)	-8 615	million EUR (current prices)
Exports of agricultural products	7 196	million EUR
Imports of agricultural products	8 379	million EUR
Current account balance	-4.6	% of GDP
General government balance	-4.3	% of GDP
General government gross debt	35.2	% of GDP

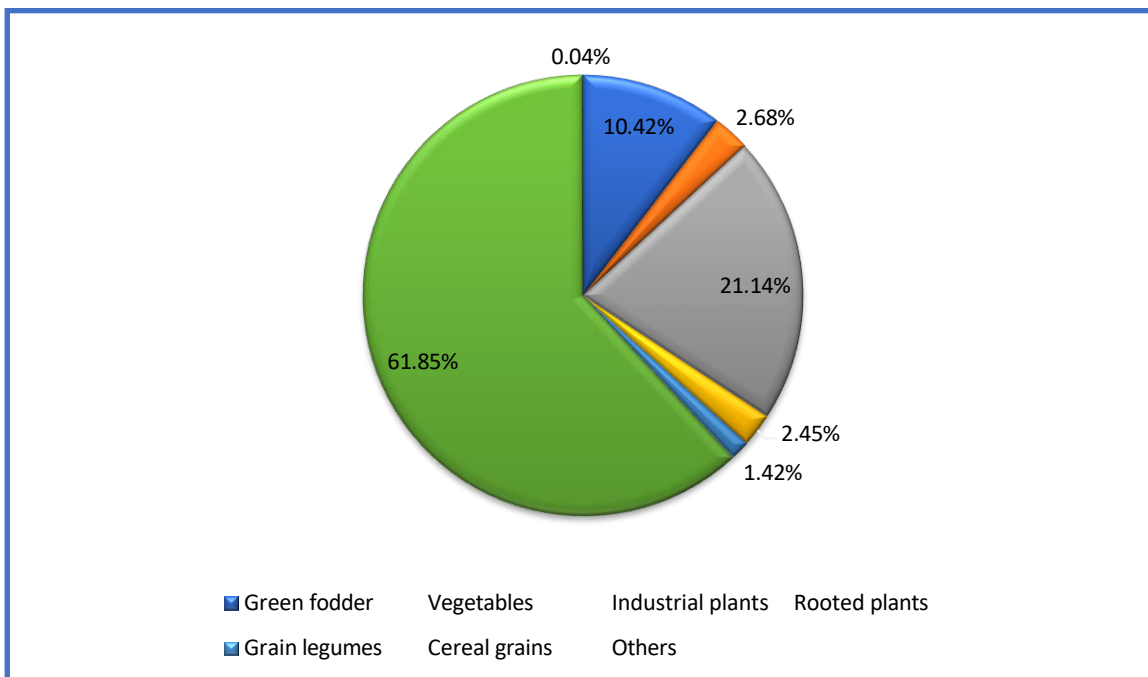
Sources: European Commission, Eurostat, and Directorate General for Economic and Financial Affairs.
Updated: June 2020 * Data refer to the year 2016

³ Statistical FACTSHEET_Romania, European Commission, June 2020 (Agriculture and Rural Development).

Romania's agricultural area according to the way of use (Statistics 2019):



Crop Structure in Romania (Statistics 2019)



- ✚ Cereal grains are represented by corn grains, wheat, barley, oats, sorghum, rice and others;
- ✚ Industrial plants are represented by oil plants, textile plants, tobacco, medicinal and aromatic plants, other industrial plants;
- ✚ Annual and perennial green fodder;

Common borders. Common solutions.

- 🇷🇺 Vegetables: tomatoes, cabbage, onions, melons, peppers, garlic, other vegetables;
- 🇷🇺 potatoes, sugar beet, fodder roots, other;
- 🇷🇺 Rooted plants: potatoes, sugar beet, fodder roots, other;
- 🇷🇺 Grain legumes: peas, beans, other legumes.

3. Main agricultural and connected sectors for international trade in Romania

Subsistence farms are undermining the performance of the agricultural sector as a whole. Both land and labor are used below their economic potential.

Cereal crop yields decreased in 2019, after a record year in 2018. Thus, according to the INS, grain production in 2019 was 29.5 million tons, down 6.5% from the record level of 31.6 million tons from 2018.

The evolution was mainly determined by the decrease in maize production, a crop that covers almost 48% of the area cultivated with cereals. Thus, grain maize production was 16.96 million tons in 2019, 9.2% lower than in the previous year (2018). In contrast, the area cultivated with maize had increased by 6.5% to 2.6 million hectares, the highest level since 2015.

However, according to the INS, Romania remained on the first place in the European Union in the production of **corn**, but also in the cultivated area, before France and Hungary.

Wheat production decreased by 2.7% compared to 2018, to 9.9 million tons, due to a minimal reduction of cultivated area (2.1 million ha), but mainly due to the decrease in yield per hectare from 4.8 tons to 4.7 tons (2016 minimum).

Barley production increased slightly to 1.9 million tons, and oat production decreased to 357,000 tons.

Potato production also declined by 10.2% to 2.7 million tonnes, although the area under cultivation increased slightly. The yield per hectare decreased from 17.9 tons to 16 tons.

For **grain legumes**, production rose by 27.7%, due to the increase in yield per hectare, compared to the previous year.

Production of **oil plants** decreased by 9%, although the cultivated area increased by 3.4%. Sunflower production increased by 12.6% to 3.45 million tons, but this advance was offset by declines in rapeseed (-47.1%) and soybeans (-20.6%).

Romania ranks first in the EU in terms of production and area cultivated by **sunflowers**. In **wheat**, Romania ranked fourth, both in cultivated area and in production, after France, Germany and Poland.

Potatoes ranked fourth in the cultivated area, after Poland, Germany, France and seventh in production, after Germany, France, Poland, the Netherlands, the United Kingdom and Belgium.⁴

Vegetable growing in Romania

In the production potential of the sector vegetable in Romania has existed for a long time for centuries, a strong tradition of family farms.

Reorganization of the production system - capitalization of vegetables and fruits to streamline conditions Romania has at the same time the improvement of the socio-economic level of the areas is a key objective of the 2014-2020 strategy.

Statistical data show an upward trend of the Romanian vegetable sector, simultaneously with an increase of consumption, and reached in 2020 a value of approx. 190 kg / capita / year. This necessary consumption is provided, thus as the specialists appreciate, in the proportion of 95%, from their production.

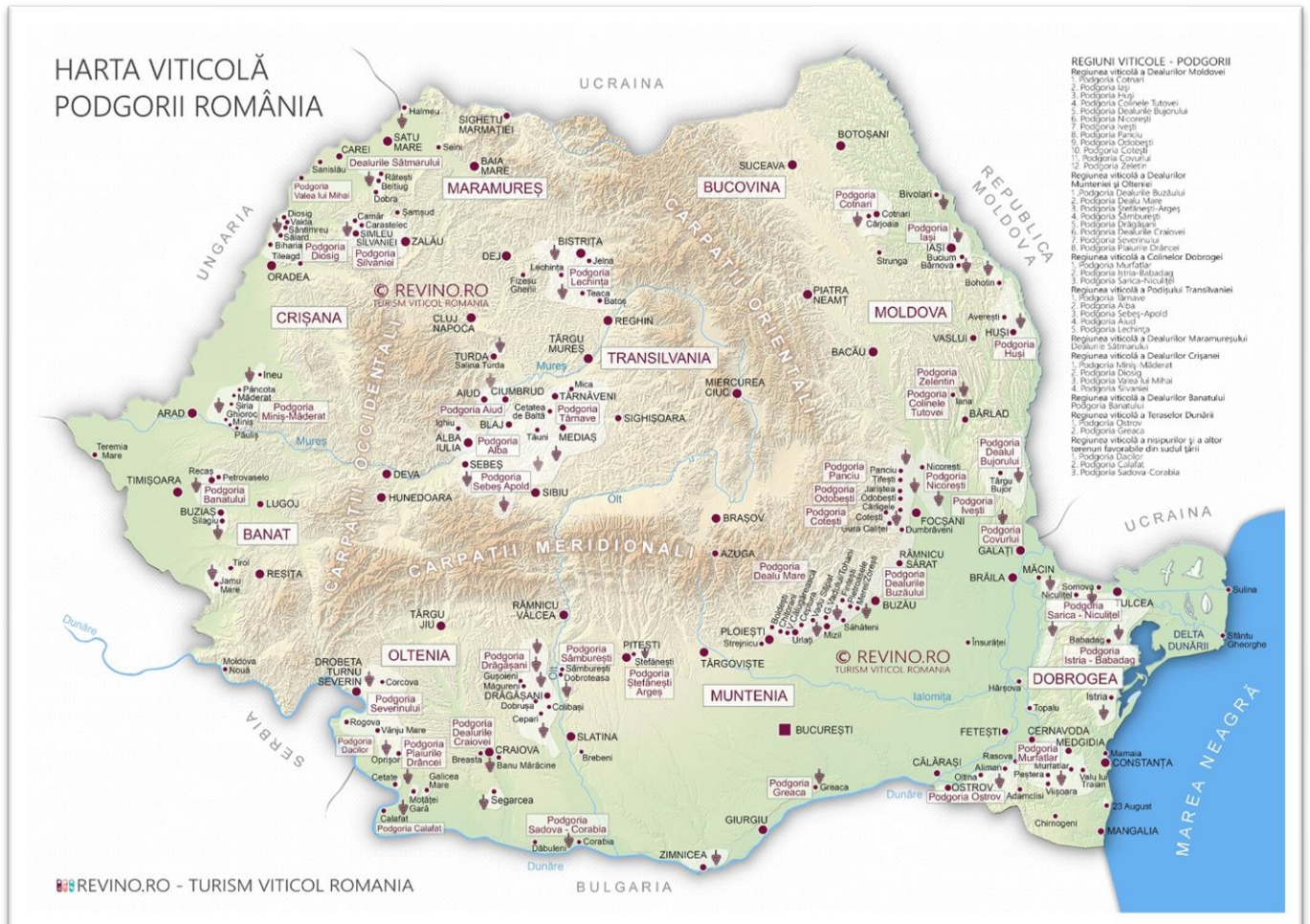
As a result of climate change globally and regionally, it is clear that the only chance of the Romanian vegetable culture is the protected vegetable culture, especially the vegetable culture in solariums. Protected crops must consider the best and cheapest damage insurance climate.



Picture source: <https://www.ceccarbusinessmagazine.ro/va-fi-infiintata-banca-de-resurse-genetice-vegetale-pentru-legumicultura-floricultura-plante-aromatice-si-medicinale-buzau-a5278/>

⁴ Source: <https://www.euractiv.ro/agricultura/productia-de-cereale-a-romaniei-a-scazut-in-2019-in-pofida-unei-suprafete-cultivate-mai-mari-18262>

Viticulture in Romania



Source: https://www.crameromania.ro/upload/files/Harta_viticolă_Podgorii_Cadre_2018_3000.jpg

Romania is one of the great wine-growing countries in the world. It currently has an area of 243,000 ha of vineyards (242,000 ha of fruit per fruit, to which are added 1000 ha of young vineyards).

At European level, Spain has the largest area under vines (941,000 hectares, ie 30% of the EU total), followed by France (803,000 ha - 25%), Italy (610,000 ha - 19%) Portugal (199,000 ha - 6%) and Romania (184,000, respectively 6%)⁵.

Wine grape plantations occupy 82% of the total vineyard area, and wine production is at the level of 5-6 million hl per year. Viticulture has well-defined areas, and within them, areas within which wines with the right of controlled origin can be produced.

⁵ https://ec.europa.eu/romania/news/20170404_romania_are_cele_mai_multe_podgorii_ro

The wine region is a large habitat that usually coincides with the historic province. It has some common characteristics in terms of ecological conditions, the assortment of varieties, range of wines that can be obtained.

The vineyard is the viticultural unit whose area meets common characteristics regarding the climate and the set of microclimates, usually soil types, cultivated varieties, cultivation and vinification technologies. The vineyard has a long tradition, and the wines obtained in a certain vineyard enjoy a reputation.

The wine centre covers a smaller area and usually more concentrated. The climate-soil unit, the technology within the wine centre is even better highlighted. As a rule, a vineyard has two or more wine centres, but there are also independent wine centres that are located outside the vineyards. For wines with a controlled designation of origin, the wine shall be called the vineyard or wine-growing centre concerned.

The wine plain is an integral part of a wine centre and is the smallest unit of wine habitat. It is located on a certain form of relief, has the same microclimate and normally prints the same quality of the products obtained.

VINEYARD REGIONS AND RELATED VINEYARDS⁶:

1. *The viticultural region of the Transylvanian Plateau* is composed of the Târnave Vineyard, Alba Vineyard, Sebeş-Apold Vineyard, Aiud Vineyard and Lechința Vineyard. Within them, there are 17 viticultural centres, apart from which there is also an independent viticultural centre (Dej), and in their composition, there are numerous viticultural plots. The main production direction of the region is white wines, obtained in a wide range, from current consumption to high brand, some of which can be semi-sweet and even sweet. Along with these, recognized in the country and abroad, there are also sparkling wines such as Jidvei, Alba, etc.



Source of the picture: <https://www.imperialtransilvania.com/2019/09/11/read-more/argomenti/events-1/articolo/tarnave-vineyard-the-road-of-the-wine-from-transylvania.html>

⁶ Source: <https://www.crameromania.ro/informatii-utile/viticultura-in-romania-crame-vin-206.html>

2. *The viticultural region of the Moldavian Hills is the largest and most famous viticultural region in Romania.*

It includes the numerous plantations from the predominantly hilly-hilly area, between the Moldavian Subcarpathians, the Curvature Carpathians, the Prut Valley and the Lower Siret Valley.

The viticultural region of the Moldavian Hills includes about 12 vineyards, namely: Cotnari Vineyard, Iasi Vineyard, Huși Vineyard, Colinele Tutovei Vineyard, Dealul Bujorului Vineyard, Nicorești Vineyard, Ivești Vineyard, Covurlui Vineyard, Zeletin Vineyard, Panciu Vineyard Cotești. Within these vineyards there are about 44 wine centres to which are added 8 independent centers: Hlipiceni, Plugari and Probota in the north, Vaslui in the center, Grivița and Nămolosa in the south, Bozieni and Răcăciuni in the west of the region. The region is profiled on the production of wines and, to a lesser extent, table grapes.

The wines obtained, mostly white, are in a wide range, from current consumption to high quality naturally sweet, which can stand alongside the best wines in the world (Sauternes, Lacrima Cristisa). In this sense, it should be noted that Cotnari wine is included in the catalog of the best wines in the world. Dry wines are mainly made in the vineyards of Odobești, Cotești, Panciu. The production of red wines has an insular character.



Source of the picture: <https://vincarta.com/blog/cotnari-region/>

3. *The hills of Muntenia and Oltenia*

This region corresponds almost entirely territorially to the large unit of hills and hills known geographically as the Getic Plateau (or Piedmont). It stretches between the northern Getic Subcarpathians and the Romanian Plain. Within the Wine Region there are a number of 8 vineyards (Buzău Hills, Dealu Mare, Ștefanești, Sâmburești, Drăgășani, Craiova Hills, Severin and Plaiurile Drancei), within which 32 wine centers are distinguished, of which three independent wine centers (Segarcea, Tg. Jiu and Poiana Crușetu). Wine production is quite diverse. Except for the Sâmburești vineyard, mainly profiled on the production of red wines, all the other vineyards produce a wide range of wines, mainly white, starting from those of current consumption, to the superior ones entitled to the designation of origin and quality steps.

4. *The Hills of Banat*

Located in southwestern Romania, in the triangle formed by the Mureş River with the Banat Mountains and the border with Yugoslavia, this region meets, to some extent, the conditions of a single vineyard.

Although the region is mainly focused on wine production, table grape varieties are not missing from the plantation. Of these, those from the Chasselas group enjoy a wider spread and a better appreciation, and in some places, the Muscat Hamburg and Muscat de Adda varieties are also found. And some and others are used more for local consumption in populated centers of the area and less for export.

5. *Crisana and Maramureş*

The region includes 4 vineyards (Miniş-Maderat, Diosig, Valea lui Mihai, Silvaniei) and about 13 wine centres, two of which (Halmeu and Seini) are independent. The dominant varieties in culture are those for wines and to a lesser extent for meals. Among the varieties for wines are: Fetească alba, Italian Riesling, Fetească regală, Furmint, Pinot gris, Mustoasă de Maderat and Iordana. Among the most important varieties for red wines are Cadarcă and Burgundy. Eco-climatic conditions allow the production of a wide range of wines, from white and red for current consumption to high quality. A good favorability for the production of red wines is found in the south of the region, especially in Miniş. In the vineyard from Şimleul Silvaniei and partially in Zalău and Maderat, the production of sparkling wines was imposed.

6. *The Hills of Dobrogea*

Located in southeastern Romania, it corresponds entirely to the Dobrogean Plateau, clearly delimited between the Danube, the Black Sea and the border with Bulgaria. The physical-geographical peculiarities of this viticultural region are essentially imprinted by the predominance of the plateau relief, with low-moderate altitude and fragmentation, by the almost generalized loess cover and by the net continental bioclimate of the Pontic steppe-forest-steppe, whose excessiveness is partially attenuated. Black Sea and the aquatic masses of Batile and the Danube Delta. The natural setting is, of course, the basic condition in the development of viticulture in this region, many of its wines being requested for export since antiquity. For their superior quality, the whole ambience of ecological factors advocates, but the climate with its particularly advantageous caloric potential prevails, less it's water component which remains deficient in natural appearance but not difficult to remedy anthropically. The viticultural region of the Dobrogea Hills includes the Sarică-Niculiţel, Istria-Babadag, Murfatlar vineyards. Within them there are 9 wine centers (Măcin, Niculiţel, Tulcea, Valea Nucarilor, Babadag, Istria, Cernavoda, Medgidia, Murfatlar), and outside them, 5 more independent wine centers (Dăeni, Hârşova, Mangalia, Adamclisi, Chirnojeni).

From a socio-economic point of view, the internal network of railways and roads, connected to the national one, ensures the circulation and consumption of wine products locally (including in the tourist area of the coast) and in the rest of the country, and Danube and maritime waterways facilitate export.

Since the region has two main production directions (table grapes and wines), it is justified why in a small region many varieties have found their place.

Among the table ones, Cardinal, Queen of the Vineyards, Chasselas, Muscat Hamburg, Muscat de Adda, Afuz Ali, etc. are cultivated. Among the varieties for white wines are Aligote, Fetească alba, Fetească regală, Pinot Gris, Chardonnay, and among the red ones Cabernet Sauvignon, Pinot noir, Merlot, Sangiovese and others.

Numerous categories and types of wine are produced from this wide range of varieties, some of which, such as those from Murfatlar and, in part, those from Sarica-Niculițel, are world-renowned.

7. The Terraces of the Danube

This region is located mostly on the terraces of the Danube in the southeast of the Romanian Plain and includes in its area the vineyards Ostrov and Greaca and 5 wine centres within the vineyards (Aliman, Băneasa, Oltina, Ostrov, Greaca) and 3 independent wine centers: Zimnicea, Giurgiu and Fetești. Although some centres are distant from each other, the presence of live connecting spreads and placed in similar ecological conditions, certifies the shaping of a distinct wine-growing region with the above name.

The main production direction of the region is the production of table grapes. For this purpose and especially in the Greek vineyard, several varieties are cultivated, starting with the early ripening ones until the late ones.

Wine production is varied, consisting mostly of wines for current consumption, among which the dominant is white. Some of the red ones can also reach the quality required of superior wine. It includes the Ostrov and Graca vineyards.

8. Sand and other favourable lands in the south of the country

This region overlaps, mainly, on the large area of sands in the south of the Oltenia Plain, the northern, median and tabular neighbourhood of the Romanian Plain between the lower Olt and the lower Siret. Within this wine region, there are three vineyards (Dacilor, Calafat, Sadova-Corabia) which comprise about eight wine centres.

The grape variety grown here consists mainly of wine varieties and to a lesser extent of table grape varieties. From the first category are mentioned the varieties Aligote, Fetească regală,

Saint Emilion, Italian Riesling, Sauvignon, Rkatiteli, Roşioara, Babeasca neagră, Muscat Ottonel and San Giovese. For table grapes, the varieties Perla de Csaba, Cardinal, Chasselas Dore, Muscat de Adda, Corna neagră and Italia are cultivated.

In the South-East region there is a strong ecosystem developed by private actors and from RDIs: universities in the region as the main source of qualified human resources, Research and Development stations for Viticulture and Vinification; contractors numerous with

production in their wineries and well-known brands for wines from counties of origin (certified varieties and trademarks); associations of winegrowers - from the region and at the national level: the Association Producers of Wine and Wine Products Dobrogea, Interprofessional Association Vrancea-Pietroasa Winery (AIVV Vrancea-Pietroasa), the Association of Producers and Romanian Wine Exporters - APEV, Professional Association of Viticulturists Ostrov Danube Terraces (APV Ostrov Danube Terraces), Panciu Wine Association (AV Panciu), Romanian Association of Authorized Tasters (ADAR) etc⁷.

Fruit growing in Romania

Fruit Growing is the agricultural production sector comprising the cultivation of fruit trees and shrubs.

Fruit growing, although it represents one of the important branches of Romanian, has as a predominant feature the very high percentage of subsistence farms, which produce mainly for self-consumption, marketing only accidentally the products obtained.

Fruit growing, although it represents one of the important branches of Romanian, has as a predominant feature the very high percentage of subsistence farms, which produce mainly for self-consumption, selling on the market only by chance the products obtained.

The total area of fruit plantations is 158,609.74 ha, which represents about 1.7% of the arable land of the country, being concentrated as follows: Argeş County (20,370 ha, respectively 12.96%), followed by the counties of Vâlcea (13,145 ha and 8.36% respectively), Prahova (9,664 ha, respectively 6.15%), Dâmboviţa (9,293 ha, respectively 5.91%), Bistriţa Năşăud 8,952.51 respectively 5.69%) Satu Mare (8,780 ha respectively 5.58%) and Buzău (8,418 ha, respectively 5.35%).

The structure of fruit plantations by species is as follows: plum 71.480 ha (45.42%), apple 60.731 ha (37.81%), cherry and cherry 7.760 ha (4.93%), pear 4.820 ha (3.06%), apricot 2.880 ha (1.83%), peach 2.690 ha (1.71%), nuts 2.231 ha (1.42%), shrubs 1.430 ha (0.91%) and strawberries 2.080 ha (1.32%)⁸.

⁷ Source: <https://uefiscdi.gov.ro/resource-85589>

⁸ Source: <https://www.madr.ro/docs/agricultura/legume-fructe/Ghid-Pomicultura-final.pdf>

Aquaculture and fishing in Romania⁹

Romania has a coastline 256 km long, which represents 5.3% of the total Black Sea coastline and 0.5% of the total coastline of the 23 EU coastal Member States. Around 900 000 people, or 4.5% of Romania's total population, live in coastal areas.

Marine fishing is exclusively in Romanian territorial waters in the Black Sea. The sector employs 757 fishermen. The national fishing fleet is largely small-scale, i.e. vessels less than 12 metres in length. Romania had 155 registered vessels in 2017, with the overwhelming majority (131) being less than 12 meters. Only 5 vessels are between 18 and 29 meters.

In 2017, marine catches and landings totalled 9 553 tonnes due to the increased demand for rapana, which totalled 9 244 tonnes. The fleet targets small pelagic species, such as European anchovy (*Engraulis encrasicolus*) and European sprat (*Sprattus sprattus*). Besides, it catches flatfish (turbot (*Psetta maxima*)), some shark/dogfish. Taking out the sea snail from the total marine catch, only 309 tonnes of other seafood is caught in the marine sector. European sprat and turbot are subject to TAC's (Total Allowable Catches). In 2019, the quota for sprat was 3 442 tonnes while the quota for turbot was 57 tonnes, but catches were far lower, only 28 tonnes for sprat and 43 tonnes for turbot.

The fishing activity is seasonal and is dependent on the weather conditions in the Black Sea, where there are large differences in temperature between winter and summer, as well as strong winds.

All fish landed is used for human consumption. The main ports used by fishers for landing catches are Mangalia, Olimp, Costinești, Mamaia, and Cape Midia. Fisheries and aquaculture are of particular importance in remote areas, where they represent the only source of income for local populations.

Inland fisheries

The total area of inland waters is more than 7.000 km², about 3% of the total area of the country. The Danube has a total length of 1 074 km in Romania, corresponding to about 3 430 km² and holding an average of about 2.23 million m³ of water. The most important inland fisheries are located there. Other areas which are of interest for inland fisheries activities are estimated at 500.000 ha of stagnating waters, 66.000 km of running waters in the mountain, hill, and plain areas.

Inland fishing is a full-time occupation practised mainly by traditional fishers. In most cases, it is a subsistence activity. Commercial inland fishing takes place in rivers, ponds, and reservoirs, including the Danube River, the Danube Delta, and Danube Delta Biosphere Reserve. In 2017, around 2 731 fishing boats and over 4 103 fishermen were involved in inland fishing, with a total estimated catch of 3.592 tonnes. Almost all (96%) the vessels and the

⁹ Source: <https://www.eurofish.dk/romania>

fishermen (97%) are concentrated on the Danube and its overflow areas, the Delta, and some of its former lagoons.

Cyprinid species dominate the catch. Goldfish (*Carassius auratus*), and freshwater bream (*Abramis brama*) account for 41% and 10% respectively of the total. Of the remainder, 13% is pontic shad (*Alosa pontica*), a member of the herring family.

Processing and trade

The native species commonly used for processing include carp, silver carp, bighead carp, bream, catfish, perch, pike, and trout. The most common imported marine species used for processing are salmon, herring, sprat, and mackerel. There is a great variety of value-added products such as salads, smoked fish, and marinades, as well as primary processed fish (headless, gutted, or portioned).

Romania imports large amounts of fisheries and aquaculture products. Imports have been steadily increasing since 2011, reaching a value of €286 million and a volume of 110 000 tonnes in 2017.

Romanian exports levels have fluctuated over the past several years. In 2017, Romania exported 24 428 tonnes, (including 17 822 tonnes of fishmeal) of fisheries and aquaculture products worth €40 million. The major export market was the EU (92%), where France, Italy, Bulgaria and Greece were the main destinations. Moldova was the largest non-EU destination receiving half of all non-EU exports. Salmon was the largest commodity group exported to Moldova.

Romania is thus a net fish importing country.

Fish Consumption

Romanian consumers traditionally prefer meat products, and the consumption of fisheries and aquaculture products is far below the EU average. However, the national average apparent consumption of fish and seafood has followed an upwards trend in recent years, reaching 6.2 kg per capita in 2015 (live weight equivalent). The majority of fish and fisheries products are distributed and sold through supermarket chains. Romanian's household consumption is dominated by live/fresh fish, followed by frozen fish, and marinated and prepared products. The top four preferred species are trout, carp, mackerel, and salmon.

Beekeeping in Romania

Beekeeping is considered to be one of the oldest known occupations, but beekeepers seem to be giving up their bees more and more often. The last years have had a considerable impact on the bee population, but also on the prices of honey and the lives of beekeepers. The

financial aid offered by the state exists, but it is far too small to really help Romanian beekeepers.

Although beekeeping is very important, both for agriculture, through pollination of crops, and for their fundamental contribution to maintaining the ecological balance and biodiversity, the Romanian state is considerably delayed in helping this profession.

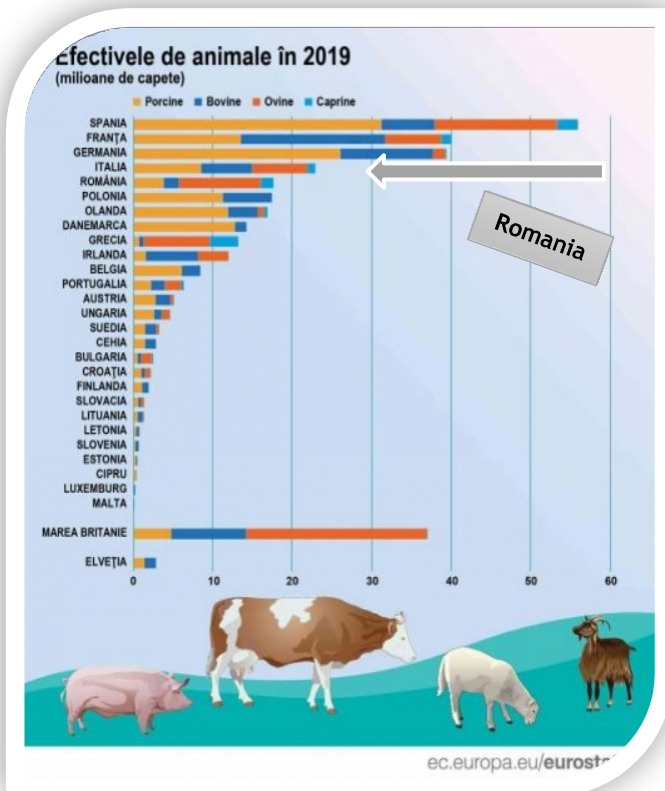


According to agroinfo.ro, the European Commission proposes to increase the budget for beekeeping aid to 60 million euros, but this after 2022.

Source: <https://www.lectiipicultura.ro/apicultura-in-romania/>

In our country are known over 1000 honey species, of which about 200 are important for beekeeping. From the Black Sea coast, to the highest peaks of the country, almost everywhere we meet interesting plants that bees are eager to exploit in search of pollen.

Livestock in Romania



According to the latest report from the European Bureau of Statistics (Eurostat), Romania ranks 5th in terms of livestock within the European Union.

In December 2019, there were 143 million pigs, 77 million cattle, 62 million sheep and 12 million goats in the Union. Spain is the country with the largest population of animals exploited for commercial purposes or for own consumption in the EU - registering 22% of the total number of pigs, 9% of the number of cattle, 25% of the sheep and 23% of the goats. In second place is France, which has the largest number of cattle among EU Member States (24%), followed by Germany (with 18% of the number of pigs registered at European level) and Italy¹⁰.

Romania is very good in terms of sheep, with over 10 million specimens, being surpassed only by Spain, which at the end of last year had no less than 15.48 million heads. The policies of the latest years in Romania seem to have had a positive impact on our sheep breeding sector, because Romania has come to report in 2019 the largest number of sheep in the last ten years.

Regarding cattle, Eurostat data show that Romania had in December 2019 a herd of 1.922 million specimens, the equivalent of about 2.5% of the total EU-27, of which 1.38 million cows raised for milk production.

Despite the consumption habits of the population, the pig farming sector is still undersized. Just over 3.8 million heads were registered in Romania at the end of last year, 1.6 million fewer than a decade ago.

Forestry

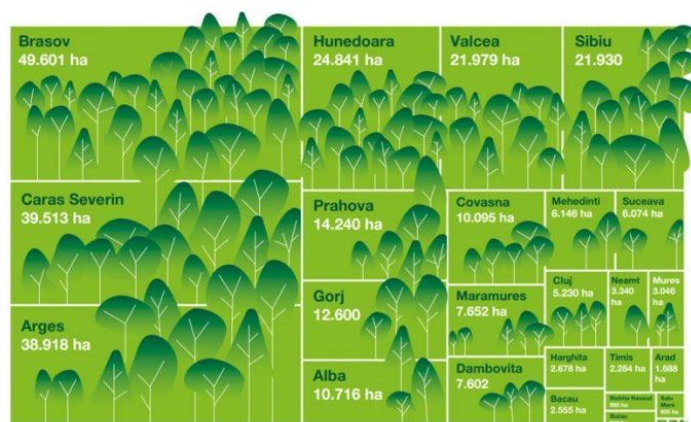
In Romania, at present the forests are considered the most precious and beautiful natural wealth on the territory of the country. These represent the green gold of the Planet, being the refuge of wild animals, but also our source of oxygen. The issue of illegal deforestation,

¹⁰ Source: <https://www.revista-ferma.ro/articole/zootehnie/zootehnia-romaneasca-pe-locul-5-in-ue>

but also of forest fires generates daily concern and fear, threats to the natural environment being the most debated topic worldwide.

In our country, you can find the oldest forests in Europe, whose charm and beauty can not be disputed.

There are three forests in Romania that have an impressive story and an enchanting landscape, these being: Mociar forest, Giurnalău forest and, last but not least, Giurnalău forest according to *descopera.ro* reports.



Source: <https://stiintasitehnica.com/greenpeace-lanseaza-harta-padurilor-virgine-potentiale-din-romania-si-studiul-situatia-padurilor-virgine-din-romania/>






4. Ecological agricultural and connected sectors in the partner countries in Romania

"Organic farming", a term protected and assigned by the EU to Romania for defining this system of agriculture and is similar to the terms "organic farming" or "organic farming" used in other Member States.

The role of the organic farming system is to produce cleaner food, more suitable for human metabolism, in full correlation with the conservation and development of the environment. One of the main purposes of organic farming is the production of fresh and authentic agri-food products that respect natural and environmental factors.¹¹

Organic farming is an agricultural method that aims to produce food using natural substances and processes.

Therefore, it has a limited impact on the environment, because it encourages:

-  responsible use of energy and natural resources;
-  biodiversity conservation;
-  conservation of regional ecological balances;
-  increasing soil fertility;
-  maintaining water quality.

¹¹ Source: <https://www.madr.ro/agricultura-ecologica.html>

Organic farming is on the rise, as a direct result of growing consumer interest in organic products.

The national logo "ae", specific to organic products, together with the Community logo are used to complete the labeling, in order to identify by consumers the products obtained in accordance with organic production methods.



The affixing of the EU logo on prepacked food is mandatory from 1 July 2010. Its use remains optional for imported products. The use of the EU Community logo must be accompanied by an indication of the place of production of the agricultural raw materials. This indication may be in the form of 'EU', 'non-EU' and / or the name of the EU Member State or non-EU Member State where the product or raw materials were obtained.

The Community logo offers the recognition of certified organic products throughout the European Union.

In Romania, organic agriculture is, as in all other countries, in full process of institutional consolidation and development in which the most active are producer associations, such as:

- AGROECOLOGY, Association of Bioagriculturists in Romania
- BIOTERRA, Association Bio Romania
- Association Romanian Institute for Sustainable Agriculture and the National Federation of Organic Agriculture.

At the governmental level, organic agriculture in Romania is coordinated by the Ministry of Agriculture and Rural Development.

Ecological agriculture restores the complexity of ecosystems. The systemic path is considered optimal when the farm combines: the diversity of cultivated plants with rotation and the level of production with the territorial norms, the animal breeding, the natural elements and with the good management of the land.



Source: <https://www.green-report.ro/agricultura-ecologica-creste-in-romania-cu-23-pe-an/>

These production combinations ensure optimal profit from available natural resources and regulatory natural processes.

Organic farming is a system and not a simple action to replace chemical fertilizers and other chemicals with natural substances.

Common borders. Common solutions.

The transition from conventional to organic agriculture is not sudden, but through a transitional period, called the "conversion period", which lasts for:

- 2 years for annual field crops;
- 3 years for perennial crops and plantations;
- 2 years for meadows and fodder crops;
- 12 months for beef cattle;
- 6 months for small ruminants and pigs;
- 6 months for dairy animals;
- 10 weeks for poultry for meat production, purchased at the age of 3 days;
- 6 weeks for birds for egg production;
- 1 year for bees, if the family was bought from conventional apiaries.

The steps for a producer of organic products are:

1. Conversion period

Before being able to obtain agricultural products that can be marketed with the mention "product obtained from organic farming" the farm must first go through the conversion period. Throughout the whole chain of obtaining an organic product, operators must constantly comply with the rules laid down in Regulation (EEC) No 2454/93. 2092/91 of the Council. They must carry out on-farm inspections, inspection and certification bodies to ensure that farmers comply with the legislation in force.
force on organic products.

2. Registration of the activity

Registration of producers in organic farming is mandatory every year. Registration of the activity as producer, processor, importer, distributor, trader in organic agriculture at the Directorate for Agriculture and Rural Development in the county where the unit / farm is located, by filling in the registration forms that give it the quality of producer in organic farming. The registration procedure of producers in organic agriculture is regulated by Order no. 1253/2013 for approval Rules on the registration of operators in organic farming, with subsequent additions and amendments.
As a result of the registration process, the M.A.D.R draws up each year the list of organic farming operators that is made available to those interested.

3. Contract with an inspection and certification body

In order to inspect his farm and obtain the organic product certificate, the producer must conclude a contract with an inspection and certification body approved by MAPDR. In Romania, the control and certification of products obtained from organic farming is currently provided by private inspection and certification bodies. They are approved by the Ministry of Agriculture and Rural Development, based on the criteria of independence, impartiality and

competence established in Order no. 181/2012 for the approval of the Rules on the organization of the inspection and certification system, approval of inspection and certification bodies and supervision of the activity of control bodies.

The approval by the M.A.D.R of the inspection and certification bodies is preceded, obligatorily, by their accreditation carried out by a body authorized for this purpose.

4. CERTIFICATION

Following the controls carried out by the inspection and certification bodies, the operators who complied with the rules production team will receive the organic product certificate and will be able to label their products with the mention "ecological". The following shall be required on the label affixed to an organic product: reference to organic production, the logos, the name and the code of the inspection and certification body which carried out the inspection and issued the organic product certificate.

The national logo "ae", specific to organic products, along with the logo are used to complete the labeling in order for consumers to identify a product obtained in accordance with organic production methods.



5. ORGANIZATION OF MARKETING

The organization of the marketing of organic products is an important element in the agricultural sector ecological. The marketing of organic products is done only by traders registered with the M.A.D.R., through different market channels: farm gate sales, wholesale store sales, store sales specialized, online stock sales for organic products and sales through seasonal markets.

5. Strategies at the national level, short description

The **Common Agricultural Policy (CAP)** is a partnership between agriculture and society at the European level.

The CAP defines the directions for tackling the sustainable development of the agricultural sector as an essential part of the European economy.

The CAP is funded at the European Union level from 2 funds, namely:

- ✚ European Agricultural Guarantee Fund (EAGF), which provides direct support and finances market measures;
- ✚ European Agricultural Fund for Rural Development (EAFRD), which finances rural development.

The CAP ensures sustainable development at the levels: food production, the development of rural communities on the principle of Bottom-up approach, in the context of prudent use

of natural resources is essential for food production and maintaining the quality of life, not only for current but future generations.

At the national level, Romania adopted PAC and build the National Rural Development Programme.



The Romanian National Rural Development Programme is the program through which non - reimbursable funds are granted from the European Union and the Government of Romania for the economic - social development of the rural space in Romania.

The main rural development priorities for the 2014-2020 programming period are:

- ❖ Modernization and increase of viability of agricultural holdings by consolidating them, opening to the market and processing of agricultural products;
- ❖ Encouraging the rejuvenation of generations of farmers by supporting the establishment of young farmers;
- ❖ Development of basic rural infrastructure as a precondition for attracting investments in rural areas and creating new jobs and implicitly for the development of rural areas;
- ❖ Encourage the diversification of the rural economy by promoting the creation and development of SMEs in non-agricultural sectors in rural areas;
- ❖ Promoting the fruit sector, as a sector with specific needs, through a dedicated subprogram;
- ❖ Encourage local development placed in the responsibility of the community through the LEADER approach. LEADER's cross-cutting competence improves competitiveness, quality of life and diversification of the rural economy, as well as combating poverty and social exclusion.

The National Rural Development Program (PNDR) 2014 - 2020 addresses the needs of the Romanian rural area identified based on a socio-economic and environmental analysis. PNDR 2020 reflects the directions of action in the development of agriculture and of the Romanian village.

National Beekeeping Program for the upcoming period 2020-2022



The purpose of the National Beekeeping Program for the period 2020-2022, hereinafter referred to as the Program, is to improve the production and marketing of bee products by providing financial support to beekeepers.

The European Commission participates in the financing of the actions from the Program with 50% of the expenses made by Romania for each accessed action, excluding VAT.

The financial years of the Program shall be established from October 16 of each year until October 15 of the following year, and the actions contained therein shall be applied annually by the applicants during the beekeeping year.

The European Union's contribution to the Program for the improvement of the production and marketing of bee products is approved by Commission Implementing Decision (EU) 2019/974 of 12 June 2019 approving the national programs for the improvement of the production and marketing of bee products, Member States under Regulation (EC) No 1308 / 2013 of the European Parliament and of the European Council.¹²

6. Main agricultural fairs and exhibitions/other relevant events in 2021-2022 in partners countries: Romania

INDAGRA is the most important agricultural event in Romania that is organized between October - November each year in Bucharest at ROMEXPO. The event is the biggest in Romania that attracts about 560 exhibitors, about 25 participating countries with a degree of business internationalization of 31%.

Due to the pandemic restrictions in the context of SARS CoV2 (COVID 19) registered between 2020 - 2021, the fairs in Romania are cancelled, but as soon as the restrictions will be aborted, INDAGRA will be fully active.

Web site: <https://www.indagra.ro/ro/>

At the regional level, Romanian Local Chambers of Commerce and Industry are the main facilitators of fairs and exhibitions for the internationalization of business.

¹² Source: <https://www.madr.ro/programul-national-apicol.html>

7. Conclusions

Testimonials...

(Source: <https://www.zf.ro/zf-24/agricultura-are-o-oportunitate-istorica-sa-se-dezvolte-dar-trebuie-19160117>)

Accelerating the development of agriculture will be possible through the contribution that technology could bring to this industry, digitalization and new modern ways of selling products and thus “agriculture will have a cool dimension in the coming years (Tiberiu MOISĂ - Vicedeputy - Mid Corporate and IMM, Transilvania Bank)”.

“We need to invest in Romanian research. Our role is to develop strategically, in the medium and long term “, says Vasile Nice, president of the League of Associations of Agricultural Producers in Romania.

Agriculture needs the new generations to look to this industry and consider a job in the agricultural sector and all people can dress elegantly, in suits, and work only in fields such as law or IT, because food remains one among the basic needs of the people, is the opinion of Călin Muscă, owner, Pork Prod.

“Education and specialization are needed, the quality of education is lacking and here I am not referring to an advanced level, but to a basic level. Specialization through education forms the basis, and the integrated system secures and maximizes your income. In order to work in agriculture, young people must be attached to this field “, says Ionuț Lungoci, executive director, Cooperativa Dobrogea Sud.



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Common borders. Common solutions.