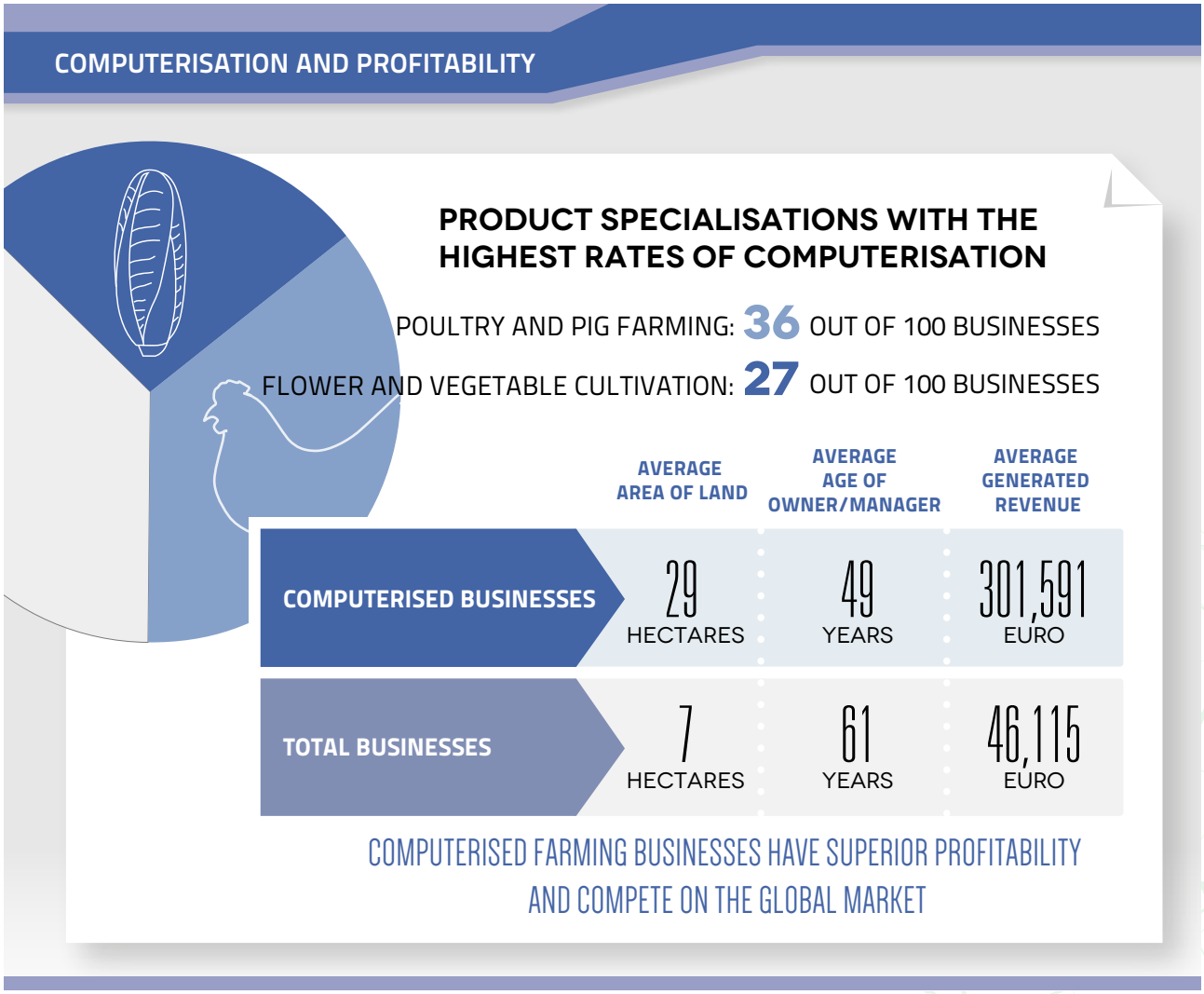
Cap.12 – Veneto Agriculture: Roots Connected with the Future

Every day, the agricultural world has to deal with a wide variety of situations, such as climate change, population growth, protection of the land, nourishment, globalisation and urbanisation: all aspects of reality that have a great impact on agriculture, and for which farming plays a strategic role. Furthermore, with the arrival of the most recent reform of the European Union Common Agricultural Policy for the 5-year period 2015-2020, it also has to face an increase in competitive pressure on national agricultural production and farmers, compared with the past, will have to be able to direct their production choices using innovative methods, actively making dialogue with other links in the production chain, from processing to marketing, in which there will be increasing focus on the added value of agricultural products, and weaving bridges and connections beyond national borders so that the consumption of goods produced on national soil may be appreciated far from home, including taking advantage of the opportunities offered by information technologies and the Internet. Indeed, we live in an age in which computerisation is used across the board in all areas of daily life and agricultural companies can also benefit from this global phenomenon and, at the end of the day, it is precisely those businesses that equip themselves in this direction that achieve greater profitability and are geared towards greater multifunctionality: the agricultural business of the future will successfully manage its activity digitally, will undertake a lot of administrative and bureaucratic activities via the internet, will make itself known via a business website, through which it will also be able to sell its products and services.



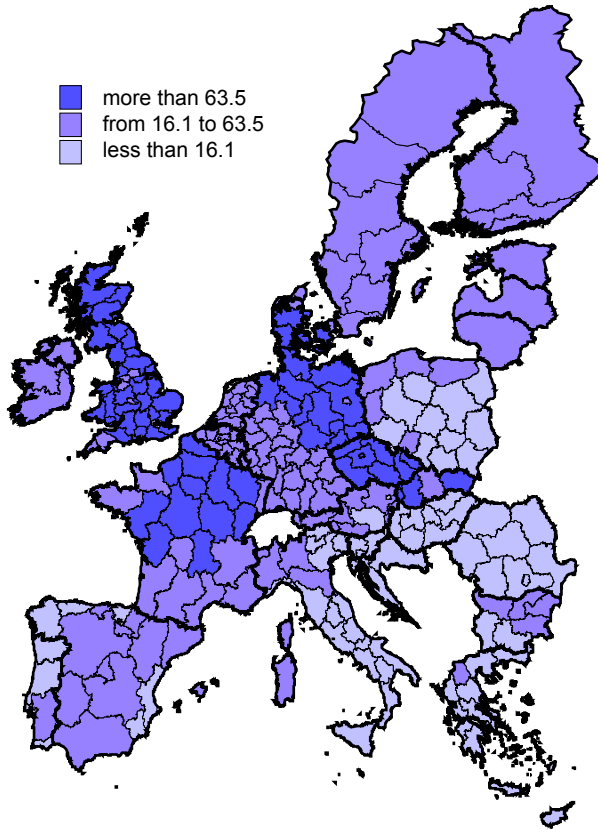
12.1 The Agricultural Network in Europe

Thanks to the arrival of the most recent reform of the European Union Common Agricultural Policy for the 5-year period 2015-2020, which involves increased focus on the needs of producers, the environment and food safety, and due to the progressive opening up of markets, agriculture has entered a phase of further change, as compared to previous programmes: the stage of market stability has ended and a new one has begun, in which agricultural businesses will have to interpret the demands of the market and adopt medium and long-term development projects, using all the instruments necessary to monitor and assess the financial results obtained in relation to the predictions made.
In view of this scenario in which competitive pressure on national agricultural production will most likely be on the increase, business owners, compared to in the past, will have to be able to direct their production choices using innovative methods, actively making dialogue with other links in the production chain, from processing to marketing, in which there will be increasing focus on the added value of agricultural products, and weaving bridges and connections beyond national borders so that the consumption of goods produced on national soil may be appreciated far from home, including taking advantage of the opportunities offered by information technologies and the Internet.
Agricultural businesses will also have to deal with climate change, population growth, protection of the land, nourishment, globalisation and urbanisation: all aspects of reality that have a great impact on farming, and for which agriculture plays a strategic role. Where, as we will see, European farming is still fragmented, insofar as it is structured as a world of numerous small businesses, of which over 60% own fewer than 5 hectares of cultivated land, and few enormous businesses, which represent just 3% of the total number and cultivate over half of the available land, with an average SAU (agricultural land area) of over 100 hectares, in the future, it will be precisely the ability to network, to become part of the network and use it to one's best advantage, that will establish who will survive among the majority of agricultural businesses.

11 million agricultural businesses in the EU-28

In 2013, there were almost 11 million agricultural businesses in Europe-28, for a cultivated land area of over 174 million hectares, occupying 40% of the total area of land, with over 130 million heads of livestock farmed[1] and almost 10 million workers employed full-time: the majority of farms were located in Romania, Poland and Italy, the majority of the agricultural land was located in Spain, France and the UK.

Fig. 12.1.1 – Average agricultural land area (hectares) per business. Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on Eurostat data

The size of the agricultural businesses are directly proportionate to their Standard Output[2], the mea-

[1] Calculated in AU (Animal Unit, beef cow equivalent)

[2] Standard Output is the monetary value of production, which includes sales, re-use, self-consumption and changes to product stock, at farm-gate prices (to this general rule, prices are considered without transport and marketing costs; exceptions are made only for products for which sale is impossible without packaging, in which case the price considered is that of the packaged product)

sure of the wealth produced by the farm: indeed, greater productivity is concentrated where the business size is above average, focused in Northern Europe, among Germany, The Netherlands, Denmark and the United Kingdom, whilst in Eastern and Southern Europe we find less profitable farms. A European farm produces on average over €30,000 of Standard Output per year, but 38.7% of businesses produce less than €2,000, whilst just 6.3% produces over €100,000, highlighting a clear disparity in profit distribution: indeed, the Gini Index, which measures income distribution and varies from 0 to 100, where 0 represents the perfectly equal distribution and 100 maximum inequality, gives a very

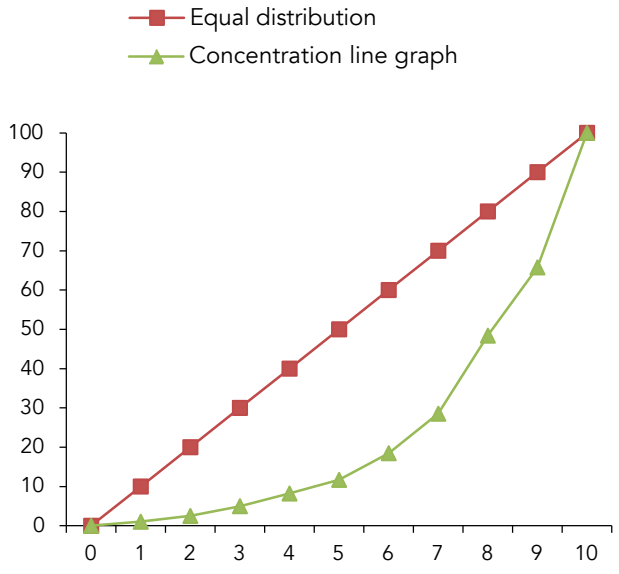
Tab. 12.1.1 - Agricultural Businesses and Agricultural Land Area (hectares) according to European country. Year 2013

Country	Agricultural business	Agricultural land area
Belgium	37,760	1,307,900
Bulgaria	254,410	4,650,940
Czech Republic	26,250	3,491,470
Denmark	38,830	2,619,340
Germany	285,030	16,699,580
Estonia	19,190	957,510
Ireland	139,600	4,959,450
Greece	709,500	4,856,780
Spain	965,000	23,300,220
France	472,210	27,739,430
Croatia	157,450	1,571,200
Italy	1,010,330	12,098,890
Cyprus	35,380	109,330
Latvia	81,800	1,877,720
Lithuania	171,800	2,861,250
Luxembourg	2,080	131,040
Hungary	491,330	4,656,520
Malta	9,360	10,880
The Netherlands	67,480	1,847,570
Austria	140,430	2,726,890
Poland	1,429,010	14,409,870
Portugal	264,420	3,641,590
Romania	3,629,660	13,055,850
Slovenia	72,380	485,760
Slovakia	23,570	1,901,610
Finland	54,400	2,282,400
Sweden	67,150	3,035,920
United Kingdom	185,190	17,326,990
Total EU-28	**10,841,000**	**174,613,900**

Source: Veneto Region Data Processing, Regional Statistical System Section on Eurostat data

high value of 0.47. This is to say that two farms taken randomly from among the European population have, on average, a revenue difference of 47% of the average income.

Fig. 12.1.2 – Line graph of Standard Output concentration. EU-28 – Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on Eurostat data

In contrast, excluding the effect of size, revenue calculated per hectare of agricultural land area, the European average of which is €1,896, is concentrated where specialisations are more profitable and this occurs above all in The Netherlands and in Northern Italy, in which Veneto stands out with average revenue three and a half times the EU average at €6,700.

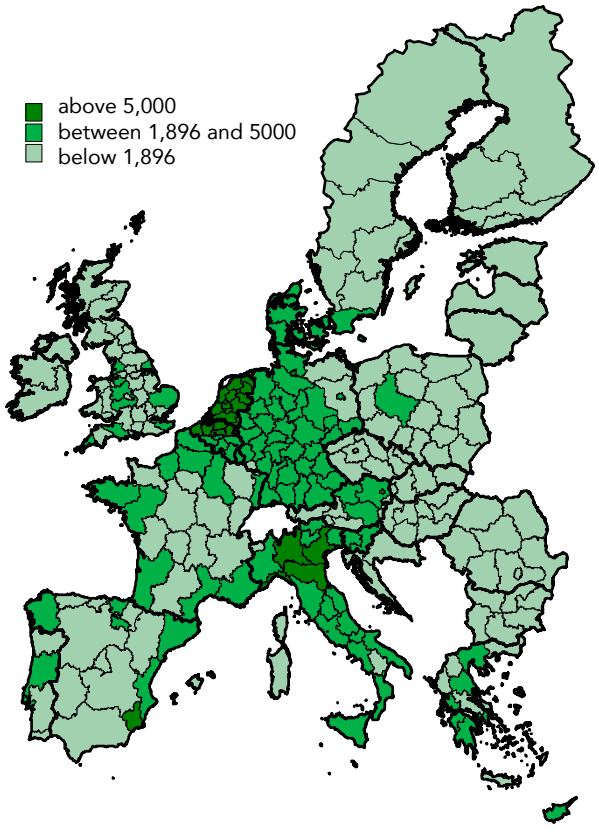
But what are the most profitable specialisations?

€6,700 the average revenue per hectare for Veneto agricultural businesses

First of all, let's take a look at how specialisations are distributed around the EU-28: arable, vineyards and orchards and herbivore livestock rearing are the top three agricultural specialisations and together make up for over 64% of the total. The remainder are devoted to pig or poultry farming, mixed crop and livestock farming and vegetable and flower cultivation.

As far as achieved standard output is concerned, the gold medal on a European level goes to vegetable and flower cultivation, which, with €141 mil

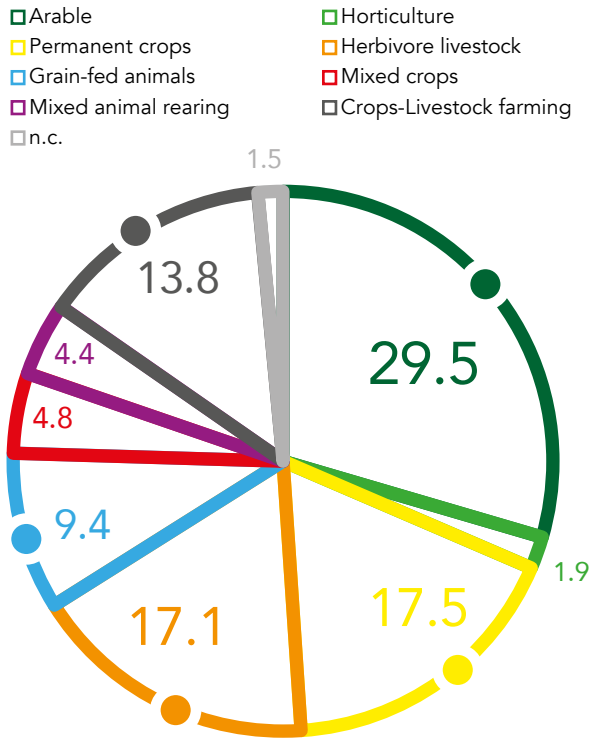
Fig. 12.1.3 – Standard Output (euro) per hectare. Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on Eurostat data

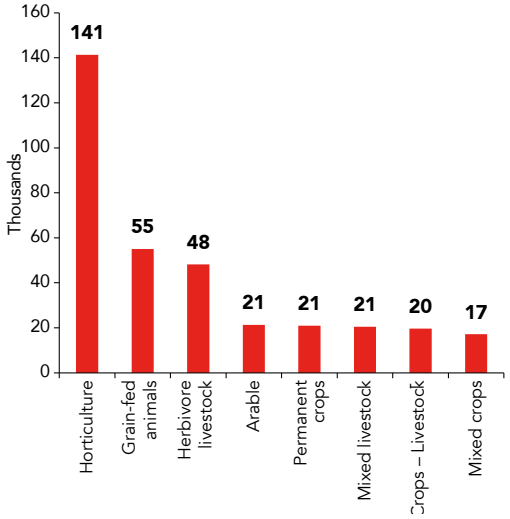
lion per business, has the highest total, despite the category not being widely represented in Europe (just over 200,000 businesses are devoted to horticulture) and instead heavily concentrated in Spain and Italy. These are followed by grain-fed animal farms (poultry and pigs) with a standard output of €55,000: within this category, there is notable disparity between poultry farming, which achieves average revenue of €38,000, and pig farming, with an average annual turnover of almost €200,000. These are then followed by the other categories, such as herbivore livestock farming (cattle, sheep and goats), arable farming (cereals, industrial crops, etc.) and permanent crops (fruit trees).

Fig. 12.1.4 - % distribution of agricultural businesses according to specialisation. EU-28 – Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on Eurostat data

Fig. 12.1.5 – Average standard gross revenue (thousands of euro) according to agricultural specialisation. EU-28 – Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on Eurostat data

12.2 Veneto Agriculture: between Confirmation and Innovation

Examining now in more detail our region's agriculture, we continue to use data from the sample survey of the structure and production of agricultural businesses updated as of 2013.

There was confirmation of the trend, now seen for several years both in Veneto and in Italy, of continuous reduction in the number of businesses and the substantial stability in the area of land devoted to farming. As compared to the 2010 Agriculture Census, Veneto farms have decreased in number by 6.9%, though to a lesser degree than the national reduction of 9.2%. However, the SAU (agricultural land area) in Veneto goes against this trend, remaining essentially the same as during the previous 3-year period (+0.2%), the only region in Italy in which this occurs, whilst on a national level, a decrease of 3.3% is recorded.

Further reduction in agricultural businesses and cultivated land in Italy

Further reduction in agricultural businesses and cultivated land in Italy

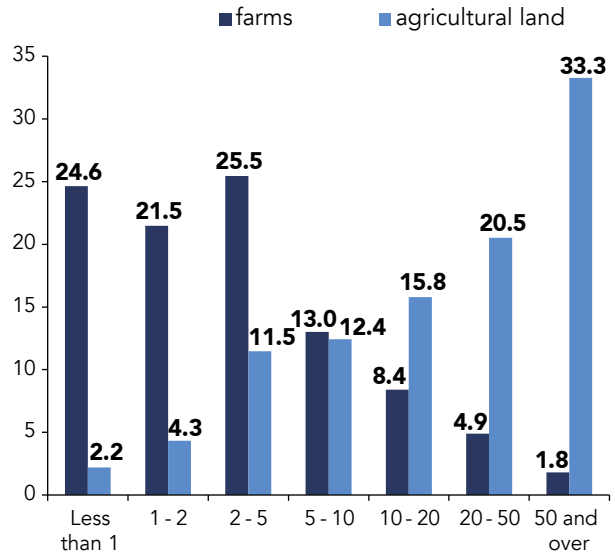
As a consequence of this, there is an increase in average agricultural land area per farm, which reaches 7.3 hectares in Veneto, whilst the national average is 8.4 hectares.

Southern Italian regions and the islands make up the largest numbers of farms and the largest areas of land devoted to farming: Puglia, Sicily, Calabria, and Campania are home to almost half of the Italian agricultural businesses, whilst Sicily, Puglia and Sardinia hold one third of agricultural land. These are also some of the regions that suffered the greatest losses of land and businesses: Campania lost 15.3% of its farms, Sardinia 14.6%, to which are added Molise (-17.1%) and Liguria (-18.5%). Molise is also the region with the highest negative variation in agricultural land area in Italy (-10.6%), followed by Umbria (-6.5%) and Tuscany (- 6.3%).

The business profile in Veneto is confirmed as almost identical to that of the last Census: the vast majority of farms (71.6%) have fewer than 5 hectares of agricultural land, yet they hold less than 18% of the agricultural land of the region. On the other hand, 6.7% of farms of over 20 hectares possess 53.8% of cultivated land. In addition, over the past 3 years, there has been an increase in the area of leased agricultural land and a fall in that of common

land, with the majority of agricultural land (58.4%) under ownership.

Fig. 12.2.1 - % distribution of farms and agricultural land according to land category (hectares). Veneto – Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

The amount of agricultural land devoted to organic farming has also increased (+15.2%), as well as the businesses that farm organically (+16.3%): today, the number of hectares devoted to organic farming reaches almost 12,000 for our region and there are more than 1,200 farms.

More land devoted to organic farming

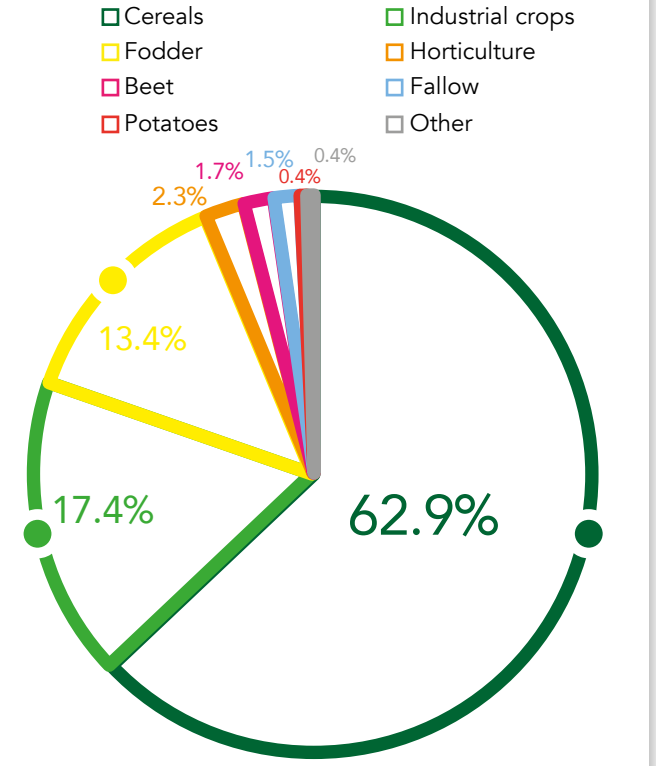
Our specialisation is arable farming: a good 68% of land is devoted to this category and cereals are the biggest type of crop, with corn leading the way, thanks to over 214,000 hectares devoted to this crop, making up almost 40% of arable land. In terms of fruit farming, over 120,000 hectares are monopolised by vineyards, covering 3 parts of land in every 4, with an increase in over 13 percentage points as compared to 2010.

There was a further decrease in livestock farming, after the already significant decline between 2000 and 2010, with a recorded number of farms below 15,000, confirming cattle as the leading category, with 65.2% of the farms surveyed, followed by poultry farming (21.8%).

In Veneto, in the past three years, the number of farm labourers has stayed relatively stable and stands at

258.000 units (-0.2%), going against the national trend, which saw a decrease in line with the fall in number of businesses (-8.1%). Veneto farms confirm their typical family nature, insofar as 3 workers out of every 4 belong the family of the owner, despite the fact that this category of worker has decreased in number (- 6.9%) as compared to other types of labourer, which have increased significantly (+28.5%). The number of days worked by both types of labourer has increased, by 7.5% for family members and by 24.5% for others.

Fig. 12.2.2 - % distribution of crops. Veneto – Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Profitable non-agricultural activities are also increasing substantially: in three years, in our region, there has been a twofold increase in the number of farms that have decided to increase their revenue by providing additional services (65.2%), improving the overall national result of 48.4%. Third party processing remains one of the most popular traditional activities, followed by agri-tourism. There is a no-

table increase in the number of farms that process their own produce, both vegetable and animal, but the real boom, on both a regional and national level, is in the production of renewable energy: +602.8% in Italy and +373.8% in the North East.

Fig. 12.2.3 - % composition and % variation as compared to 2010 of people who work in agricultural businesses according to type of labour. Veneto – Year 2013

Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

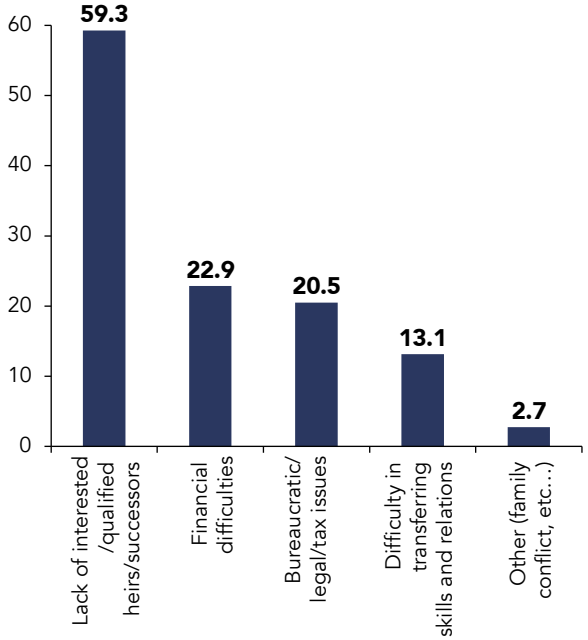
As already highlighted as part of the 6th Agriculture Census, Veneto displays an urgent demand for generational change in the top management of agricultural businesses, given that the average age of the leading figures in farming in 2010 was over 60 years and the proportion of young people under 40 was below 7%.

Almost half of heads of agricultural businesses in Veneto want to involve younger generations of their families in farm management

In 2013, for the first time, in the inter-census sample survey questionnaire, a section was included on generational change within the family of the head of the business and on the inclination to invest in the business. The aim was to understand in a more organic fashion from whom the farms and land had been taken over and whether it was foreseen to pass the farm management on to second generations in the future and any problems that may be an obstacle to doing so.

The vast majority (71.6%) of farms had been taken over by a direct family member or relative and thus ownership had stayed within the original family. 9.2% declared having taken over from third parties. For the remaining 14.8%, ownership had not been taken over from others; in which case, the business is presumably newly founded. Just under half of heads of agricultural businesses (45.6%) declared they wanted to involve their own family in passing on the business to younger generations in the future. Of those who declared the existence of factors inhibiting the handing down of the business, the majority (59.3%) declared the main reason to the lack of interested or qualified successors or heirs, followed by financial difficulties (22.9%) and thirdly problems relating to bureaucratic, legal or tax issues (20.5%).

Fig. 12.2.4 - % distribution of factors inhibiting the handing down of business ownership. Veneto – Year 2013



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

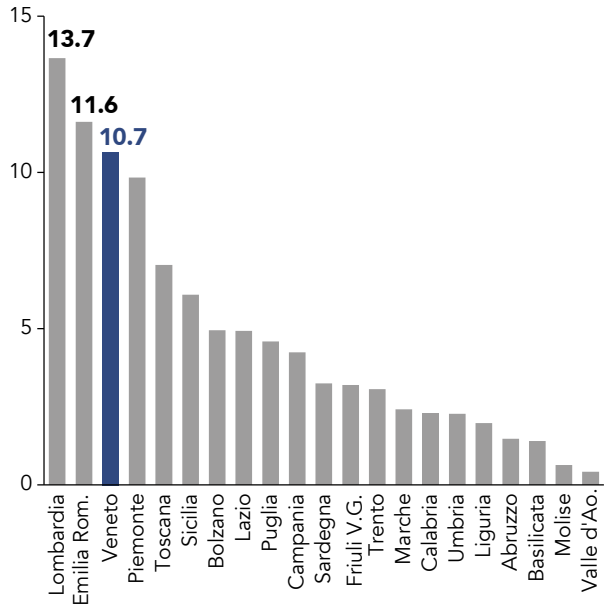
Finally, examination was made of the inclination to invest in the near future: a good 60% declared to have no intention of making investments in the next 3 years, 17.2% expressed no definite opinion on the matter, 12.6% would only invest in view of public funding and only 6.5% believed themselves

capable of investing even without subsidies.

Computerisation and Agriculture: where are we now?

We live in an age in which computerisation is of primary importance, across the board in all areas of daily life. Information, money, ideas all travel through the fibres and chips of our electronic devices at increasing speed and immediacy. Agricultural businesses can also benefit from this global phenomenon; at the end of the day, we will see that it is precisely those businesses that equip themselves in this direction that will achieve greater profitability and will be geared towards greater multifunctionality: the agricultural business of the future will successfully manage its activity digitally, will undertake a lot of administrative and bureaucratic activities via the internet, will make itself known via a business website, through which it will also be able to sell its products and services.

Fig. 12.2.5 - % distribution of computerised farms per region. Italy – Year 2010



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

There are almost 61,000 computerised agricultural businesses in Italy, 3.8% of the total number. As well as not yet having a particularly high rate of incidence, the phenomenon is concentrated very regionally, inasmuch as the top five regions in Italy are home to over half of computerised farms, of which 11% are in Veneto, in third place behind Lombardy (13.7%) and Emilia Romagna (11.6%).

Veneto in third place among Italian regions for number of computerised farms

In terms of our region, among computerised agricultural businesses, which represent 5.4% of all farms, it is possible to examine in further detail the main uses of IT equipment and their most significant features.

Three farms out of four use IT to manage business administration (accounting, wages), 37.8% use it to manage crop farming and 26.3% to manage livestock rearing. Among computerised farms, 20% use the internet as part of their activities and 43.1% of these have their own website; in addition, 11% use e- commerce for the sale of goods or services and 16% make purchases via the internet.

The head of computerised farms is younger than average, at 49 years against the overall average of 61; he/she manages a larger than average business, with an average of 29 hectares of agricultural land – four times the regional average, and produces annual revenue[3] six times the average, at over €300,000. This last aspect is definitely attributable to the fact that specialisations[4] with the highest revenue are also those which are most inclined towards computerisation: 32.6% of farms with grain-fed animals are computerised, and the same is true for 27.2% of horticultural businesses and 14.9% of mixed livestock farms, which produce on average revenues of €1.4 million, €359,000 and €784,000 respectively.

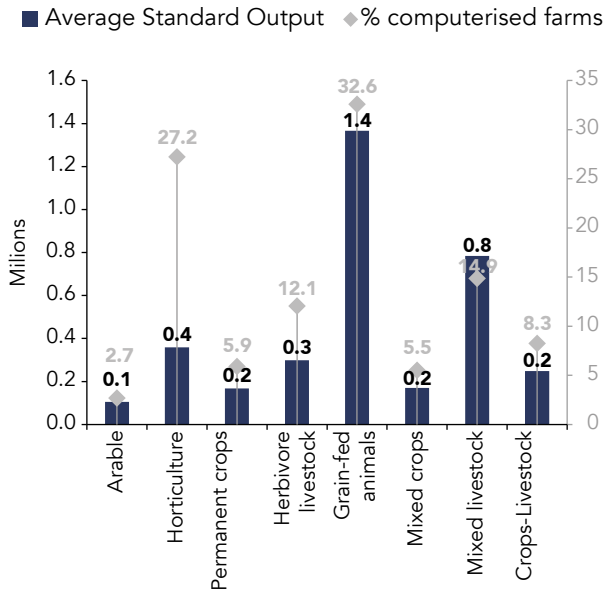
In order to identify the factors underlying the variability of agricultural business characteristics, multivariate statistical analysis[5] was undertaken on a series of variables selected according to the criteria of interest.

[3] Calculated by means of Standard Output, the monetary value of production, which includes sales, re-use, self- consumption and changes to product stock, at farm-gate prices (to this general rule, prices are considered without transport and marketing costs; exceptions are made only for products for which sale is impossible without packaging, in which case the price considered is that of the packaged product)

[4] Identified by means of the OTE (type of farming and economic size), which is determined using the percentage impact of standard production of the different production activities of the business, as compared to its total standard production.

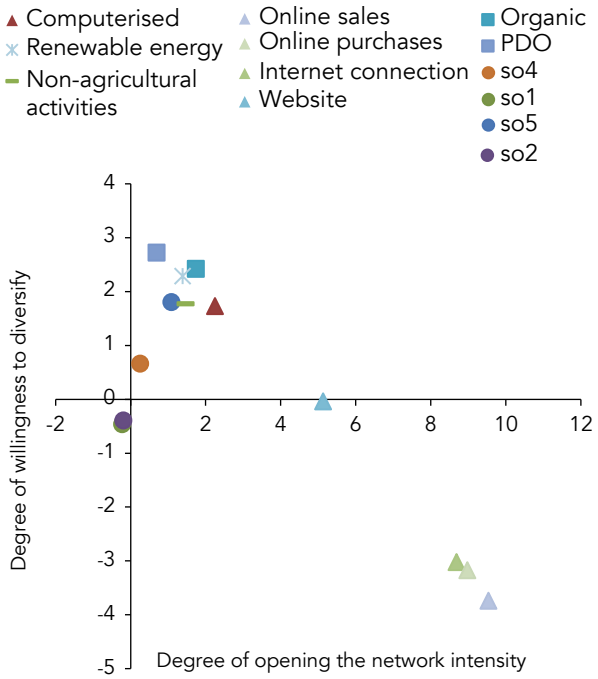
[5] Analysis of functions

Fig. 12.2.6 – Average Standard Output (millions of euro) of computerised farms and computerised farms as % of the total per specialisation. Veneto – Year 2010



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Fig. 12.2.7 – Distribution of categories of interest along the two factors. Veneto – Year 2010



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Two factors emerged and, thanks to the scores obtained by each category applied, it was possible to identify them semantically as "degree of openness towards the internet" and "degree of inclination towards diversification".

The categories that most influenced the first factor are, naturally, those related to possession of an internet connection and to the use made of it: the category that has the greatest influence is selling own products or services online, followed by making purchases via the internet and, finally, possessing a website. At the very top end of this range, we find the most advanced businesses in terms of IT: the pioneers that will shape the image of the agricultural business of the near future; this handful of farms is distinguished by a large average area of agricultural land (28.7 hectares), Standard Output per capita of over €280,000 and a head of business with an average age of 49 years. These farms tend to specialise in horticulture with non- agricultural activities in tourism or social services (agri-tourism, educational farm, social activities).

Computerised farms are younger, larger and more profitable

The categories that most influence the second factor are those corresponding to having been capable of diversifying agricultural activities, such as producing PDO or PGI products, converting to organic farming, possessing renewable energy plants and devoting themselves to different, profitable non-agricultural activities. The main features of these businesses are much higher than average revenue, standard output of over €100,000, a younger than regional average (54 years) head of business, an average of over 18 hectares of agricultural land, significant tendency towards computerisation but not towards internet connection. In this group of agricultural businesses, the tendency towards animal specialisation is very clear; indeed, we find those specialised in both grain-fed animals (poultry, pigs) and herbivore livestock (cattle, sheep, goats) and the most popular profitable non-agricultural activities are the provision of livestock rearing services and the processing of animal products.

On the other side of both factors, we find the age-old farms that form the hard core of Veneto agriculture; those that have no openness to the internet or inclination towards multifunctionality. These are mostly specialised in arable farming, with a head of business of over 65 years and with low or no aca-

demic qualification, with no diversification and with annual turnover of less than €8,000. This group is also the best represented, insofar as it hold over half of Veneto farms, but it is also destined to lose pace gradually to more innovative and dynamic businesses, with a tendency towards diversification, providing a vast range of services, including via internet.

Professional Communities in Agriculture

The primary sector is no long a "traditional" economic sector, generator of goods (agricultural, forestry, agri-food) and more recently services (tourism, culture, land protection, education, welfare, etc.). The primary sector today is a combination of economic, social and territorial relationships and, in certain aspects, "lifestyles" and takes on, today far more than yesterday, processes that are first-and-foremost to do with socio-economic connection, a fusion of languages and openness to innovation. All this is developed within the relations between business and public administration, between enterprises in the business networks, in the human capital growth processes, in consumer relations and in relationships with society as a whole. All these aspects belong to the paradigm of the digital network, and therefore it is clear that the instruments and places of digital sharing must involve the different agricultural operators and, in particular, those who operate in the agricultural knowledge system (experts, trainers, consultants, researchers, etc.). One example is a range of group experiences in "Professional Communities", i.e. groups of professionals, researchers, managers of public and private bodies interested in specific subject areas, who come together in a virtual place in order to be continuously informed, to discuss and develop their knowledge. Supported by the e-learning portal of the Veneto Region (elearning.regione.veneto.it), Veneto Agriculture founded over time six Communities on the following subjects: Cross-compliance, Safety in the Workplace, Rural Development (diversification, rural tourism), Innovation and Competitiveness, Bioenergy and Apiculture.

There are over 1,700 registered users. The majority are individuals who have participated in courses or seminars on these subjects. In fact, the Community is the natural outlet for an educational or formative pathway, offering the user the opportunity not only to continue to be informed on the subject matter, but, above all, to be able to stay in contact with other course participants and teachers. Furthermore, by bringing together individuals who have undertaken specific, common training, the community is made up of "equals", that is to say people who have a similar knowledge base and use the same language, avoiding the creation of spurious groupings. The Community is not a newsletter, but is a permanently open, multidirectional area of communication, i.e. able to keep the different operators connected. A Professional Community is not a website to be visited once in a while in search of something new, but is a place enriched by the experiences shared by each participant. Therefore, the central instrument in the community is the forum, a place of discussion and debate, with the possibility of posting documents of interest. It is a professional forum, not a generalist social network. The six Communities have different degrees of participation. As is to be expected in these groups, alongside a smaller group of particularly active individuals, the majority is made up of more or less attentive "spectators", who follow but do not intervene in discussions. However, the periodic, 6-monthly monitoring records significant rates of participation of between 35% and 51% (percentage of those registered with the community who have logged in at least once in the previous six months), depending on the community examined, with numbers of posts varying between 10 and 100 on average, every six months.

The experience of the approved Professional Communities received support in measures 111 and 331 (knowledge transfer) of the Rural Development Programme 2007-2013 and has been registered by the European Commission among the best-practices of the system of knowledge transfer in agriculture (RDP Projects Database, 2012).

Social Farming

The agriculture sector is increasingly going beyond the function of producing food products, extending its activities to other, very different areas, which require complementary skills and expertise. There has been much discussion of the multifunctional agricultural business, first officially created in 2001, with the first law of regulation that opened up the way for numerous alternative activities, in any case related to crop- growing or livestock farming: from agri-tourism to direct selling, educational farms and environmental maintenance. Social farming finds its place within this context of multifunctionality, broadening yet further the role of the primary sector based on the demands of civil society and establi-

shing connections with other sectors in the region with a view towards mutual utility. For several years now, there has been a multiplicity of experiences that, although not ascribable to a single model, have the shared characteristic of integrating social/health care, educational, training, work placement and recreational initiatives as part of agricultural activities, targeting in particular the disadvantaged or those at risk of social exclusion.
Therefore, social farming represents a possible answer to the growing needs of the population in terms of the provision of social/health and social/occupational services, offering forms of social innovation often associated with experiences of economic and environmental innovation.
There are various types of social farming activities:
- work placement for people suffering temporary or permanent difficulties (psychological or physical handicap, psychiatric problems, addiction to alcohol or drugs, incarceration, etc.) on farms or with agricultural social cooperatives;
- training for individuals with poor employment prospects, with the objective of achieving work placement;
- provision of joint therapy activities, in collaboration with the social/health services, for people in temporary or permanent difficulty;
- provision of services for children (rural nursery, recreational activities, school camps, summer camps, etc.) and the elderly (recreational activities, social vegetable gardening, meal services, care, etc.).
These activities are designed and managed by different entities, by partnership agreements made on a local level that respond to specific requirements, combining available skills and expertise at much lower costs as compared to the standard social/health services provided by public services.
The first social farming experiences data back to the late 1970s, going on to multiply, especially in regions such as Sicily, Tuscany, Lombardy and Lazio. There is also a significant presence in Veneto: based on a survey published in 2014 by the INEA (National Institute of Agrarian Economy), our region is home to 21 social farming entities, divided among agricultural enterprises, associations, social farming cooperatives and prisons, out of a total of 396 dedicated establishments on a national level, which provide work for around 4,000 employees and produce a turnover of €200 million, according to Agricultural Ministry estimates.
On a European level, the most significant social farming experiences have been developed in The Netherlands and in Germany and have achieved important recognition with the issue of the own-initiative opinion 2013/C 44/07 "Social farming: green therapy and social and health policies" expressed by the European Economic and Social Committee.
Social farming was included for the first time in the 2007-2013 Rural Development Programmes of individual regions, mainly in relation to Axis 3 "Quality of life in rural areas and diversification of the rural economy." In Veneto, the measures implemented were 311, 321, 331 and 341. The first two, addressing agricultural businesses, involved 106 projects for a total allowed expenditure of around €13.2 million and payment of €5.7 million.
In 2013, Veneto also issued Regional Law No. 14 "Regulations on Social Farming", with the aim of acknowledging, promoting and regulating the areas of activity and operational methods.

Agroforestry

Agroforestry is the combination of agricultural systems involving the cultivation of tree and/or perennial shrub species, associated with arable land and/or pastures, in the same unit of land area. These systems are the most common form of land use in countries in tropical and equatorial regions and are still found in the Mediterranean basin, including Italy, above all in the more marginalised areas less suitable for farming. However, since the 1950s/60s, in countries with intensive farming, such in the EU, agricultural mechanisation and the tendency towards single-crop farming have led to a drastic reduction in agroforestry systems, which were once the norm (e.g. wooded arable farming, wooded pastures, etc.).
In more recent years, there has been a re-evaluation of agroforestry, in view of the fact that the association of trees and crops or livestock on the same land responds to both production and environmental demands.
Hundreds of studies demonstrate that agroforestry, by connecting two different systems, i.e. farming and forestry has numerous advantages:
• overall productivity is superior to that of total equivalent single-crop farming, in certain cases with an estimated increase of 40%;
• diversification of farming production;
• conciliation of food and biomass production;
• less need for input (fertilisers, pesticides, etc.);
• direct (by increasing crop species) and indirect (by increasing the flora and fauna who live in the system) increase in biodiversity;

• improved soil fertility;
• protection of the land from erosion and pollution;
• improved water quality;
• increase of around 2 tonnes/hectare a year in carbon stored in the system, protecting against global warming;
• provision of shade, which reduces global warming (both for crops and animals;
• improved landscape.

These features respond fully to all the objectives of global, European and national policies on sustainable rural development. Therefore, the development of agroforestry systems can contribute to recreating the correct balance between farming and environment, protecting our country's traditions and providing a possible reorganisation of the land, without damaging the income of the farmer. However, it is clear that systems must be developed that enable mechanisation and that are capable of satisfying all the needs of modern and sustainable farming, including in terms of revenue. Indeed, agroforestry does not replace common farming methods, but instead it adds to them and improves them with the aim of producing more and in the most sustainable manner.

On a national level, the RDPs approved by the regions include agroforestry measures (Art. 23, Reg. EU 1305/2013) that are implemented and funded in very different ways. In Veneto, the new RDP envisages a specific measure (Intervention 8.2.1) for the creation of wooded pasture systems and the plantation of wooded arable land, whilst there have been numerous actions underway for some time aimed at transferring knowledge about agroforestry and demonstrating its validity in modern farming systems. In particular, Veneto Agricultura is using its network of pilot demonstration farms to carry out a series of important experiments, often funded by the EU (e.g. LIFE projects).

It is deemed that, on a national level, the time has come to take on the concept of agroforestry in a determined fashion, as much in research and broadcasting of information, as in policies, in order to bring Italy up to speed with the rest of Europe and the world in a sector that will necessarily be called upon to provide a great contribution in terms of sustainable development.

12.3 Agri-food Imports and Exports

Veritable networks of entities are created around food, its production, distribution and consumption, which bring together among themselves the various leading players of the production chain and of consumers in a cohesive effort towards dealing with situations and problems that would be difficult to solve alone.

We are thinking about wine growers' associations, cooperatives, protection consortia, producer organisations, ethical purchasing groups: all phenomena that, in the field of agri-food, on the side of both supply and demand, are seeing significant diffusion and increasingly strong local rooting.

This becomes of fundamental importance in questions in which the strength of the individual is not enough, such as, for example, taking traditional local products beyond national borders, accompanied by the history, culture and work which make them so characteristic, in such a way as to ensure that the end consumer recognises the superiority of quality and is inclined to buy again. And it is not just promotion that channels the energy of the production chain, but also defending company brands, too often targeted by "Italian sounding", i.e. the use of geographical denominations, images and brands that are evocative of Italy in order to promote and market products that have nothing to do with Italy, capable of causing millions of euros of damage to our economy.

Veneto is the leading Italian region for exports in agri-food products

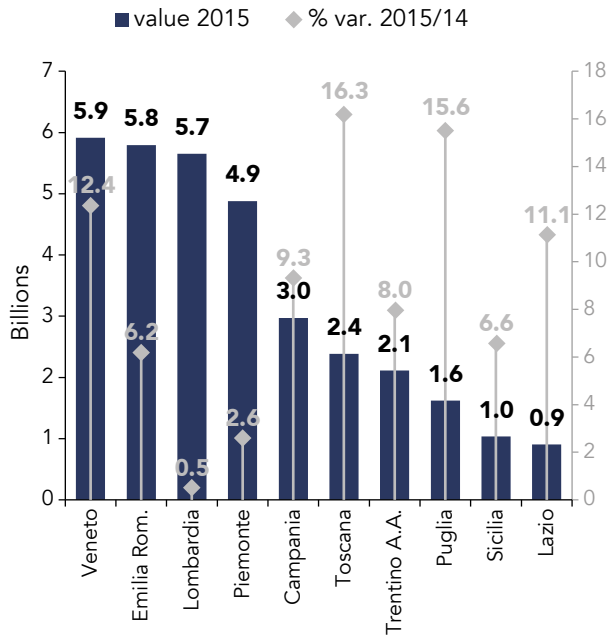
And perhaps it is in this capacity to connect up the different players of the system that is the strength of Veneto agri-food[6], whose products became the most exported in Italy for the first time, for a value of almost €6 billion, representing 16% of the national total.

The historical leading contenders, Emilia-Romagna and Lombardy, have had to settle for second and third places respectively. Together with Piedmont, these four regions represent three fifths of the national total, which, for 2015, was just under €37 billion, with significant growth as compared to the previous year, of 7.4 percentage points.

Veneto also imports food products, to the extent that the value is the second highest in Italy, with €6.4 billion, after Lombardy, which imports €9.9 billion of food products and ahead of Emilia-Roma

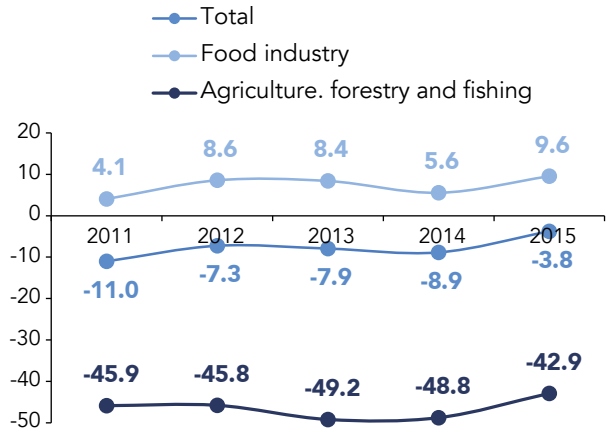
[6] Exports were considered of the two economic groups: "agriculture, forestry and fishing" and "food industry".

Fig. 12.3.1 – Value (billions of euro) of agri-food exports and % var. on the previous year for the top ten regions – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Fig. 12.3.2 – Normalised balance (*) of the commercial trade of agri-food products according to category. Veneto – Years 2011:2015



(*)The normalised balance is given by the percentage ration between the current balance and the sum of exports and imports. Its value varies between -100, in the case of a country being an importer only, and +100, in the case of a country being an exporter only.
Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

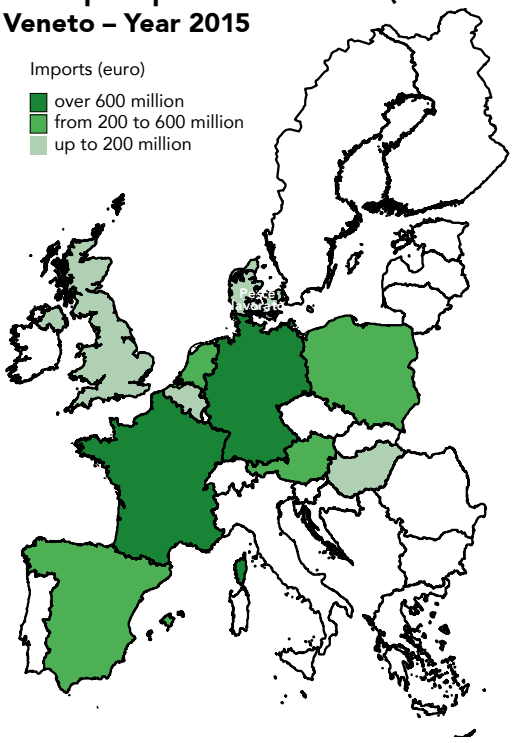
gna. The balance of trade[7] between exported and imported agri-food products is historically marked by a deficit for our region and also on a national level: that is to say that, usually, the value of imports exceeds that of exports, though this is true mainly for agricultural, forestry and fishing goods, whilst the balance for the food industry has been positive for many years.
Analysing in more depth the complex commercial network that ties Veneto to other countries around the world, it is clear that Germany is our biggest partner, in terms of both imports and exports, absorbing around a fifth of flows in both directions.

Imports

The top ten countries from which we import are all European, making up, with Germany, almost three quarters of all our imports: France, Spain, The Netherlands, Austria, Poland, Belgium, Hungary, Denmark and the United Kingdom.
From Germany, Austria and Belgium, Veneto imports mostly dairy products; from Poland, the United Kingdom and The Netherlands, meat-based products; from Spain and Denmark, processed fish; from Hungary, vegetables and cereals; and from France, live animals.
Focusing on the basis of our demand for food products from abroad, we observe that, for processed foods, it is meat-based products that have the highest value for our domestic demand, with over €1.1 billion, almost the same as the previous year (-0.8%), followed by dairy produce (€768 million), a sharp fall as compared to 2014 (-10.5%) and processed fish, which rises in value by almost 13 percentage points to reach €542 million.
Aside from baked products, however, all the food industry products also experienced considerable growth, often above 10%. In the past 5 years, the product that has increased the most in volume, by almost 200%, is the oils and fats category, reaching €300 million in imports in 2015; among all the food industry products, only imports in dairy produce suffered a fall, of -3.0%.
As far as concerns the purely agricultural products, the leading category is vegetables and cereals,

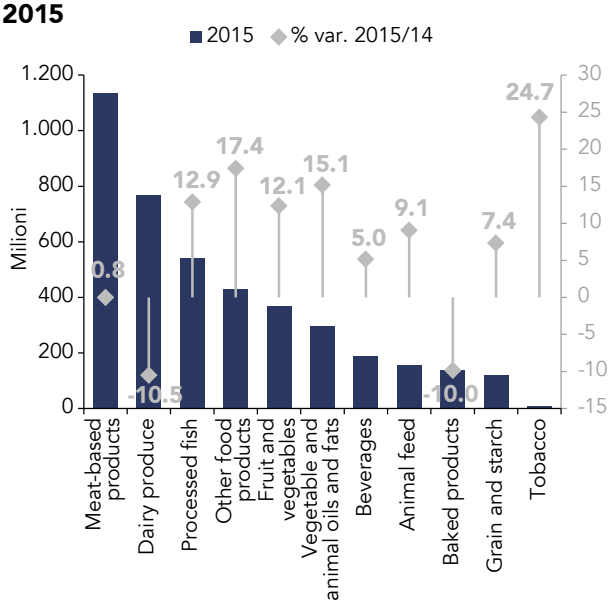
[7] The normalised balance is given by the percentage ration between the current balance and the sum of exports and imports. Its value varies between -100, in the case of a country being an importer only, and +100, in the case of a country being an exporter only; if the balance is equal, however, the normalised balance is 0.

Fig. 12.3.3 – Principal products imported from the top 10 partner countries (millions of euro). Veneto – Year 2015



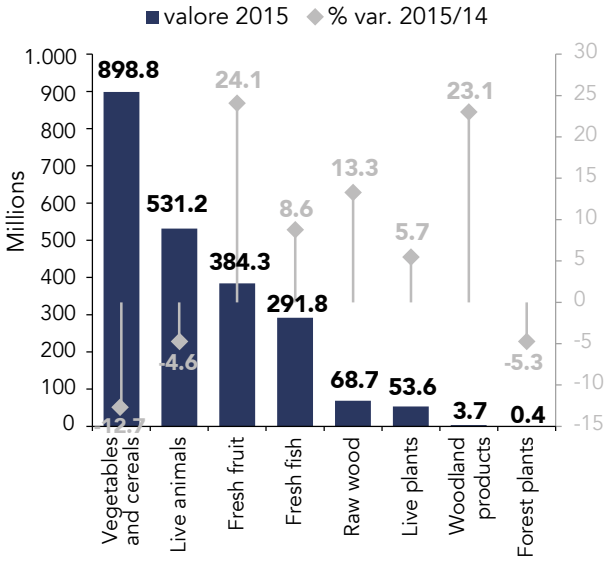
Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Fig. 12.3.4 – Value of imports (millions of euro) of Food Industry products according to type and % var. on the previous year. Veneto – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Fig. 12.3.5 – Value of imports (millions of euro) of Agriculture, Forestry and Fishing products according to type and % var. on the previous year. Veneto – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

which, although with a decrease of 12.7% as compared to 2014, still reaches a value of almost €900 million, followed by live animals, which make up for almost half of imports (€531.2 million), again with a decrease (- 4.6%). Fresh fruit, however, grew by 24.1% to reach third place with a value of €384.3 million. All the other agricultural products also increase in value, with the sole exclusion of forest plants. In the past 5 years, fresh fruit imports have grown considerably, increasing by 40.7% in import value since 2011, whilst numerous products have seen decreased in values over the same 5 years: in addition to forest plants (- 29.3%), vegetables and cereals (-8.7%), woodland products (-6.8%) and raw wood (-6.6%).

Exports

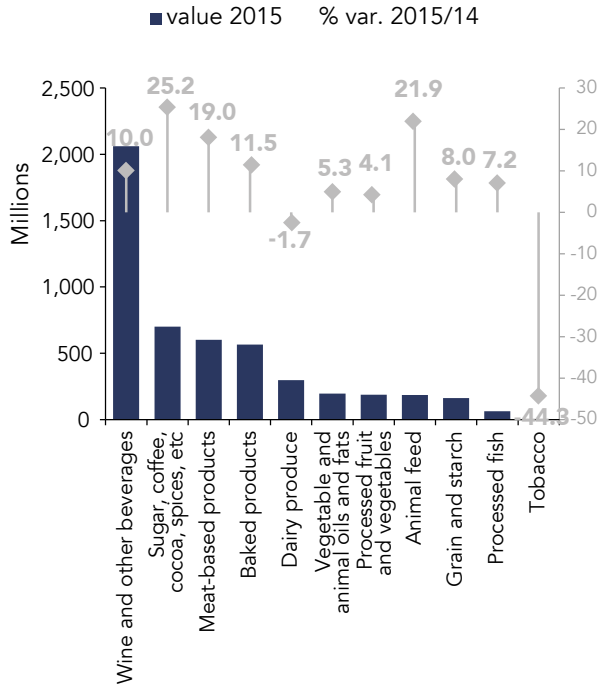
Among exported products, the category "Wine and other beverages", which includes, naturally, wine, is the one that brings in the greatest revenue, with over €2 billion, almost 35% of the total agri-food produce exported from Veneto. Over the course of 2015, there was a considerable increase of 10%, as compared to 2014, and more generally, with regard to food industry products, this growth trend was confirmed for all exports, with the sole

exclusion of dairy produce, which fell in any case by just -1.7%, and tobacco (-44.3%). In the past five years, the greatest increase has been in exports of oils and fats (+104.8%), which have reached a value of almost €200 million.

No slowdown in the growth in wine exports

On the agricultural front, our best sellers are vegetables and cereals, with €412 million, an increase of over 12 point over the course of the year, followed closely by fresh fruit (€372 million), in which exports have also grown significantly (+21.1%). In third place, we find fresh fish, down by over 5 percentage points over the past two years, reaching a value of €54.7 million. Woodland plants and vegetable products also showed a marked increase. Considering a broader time frame, we can observe significant growth in the values of raw wood, live plants and fruit.

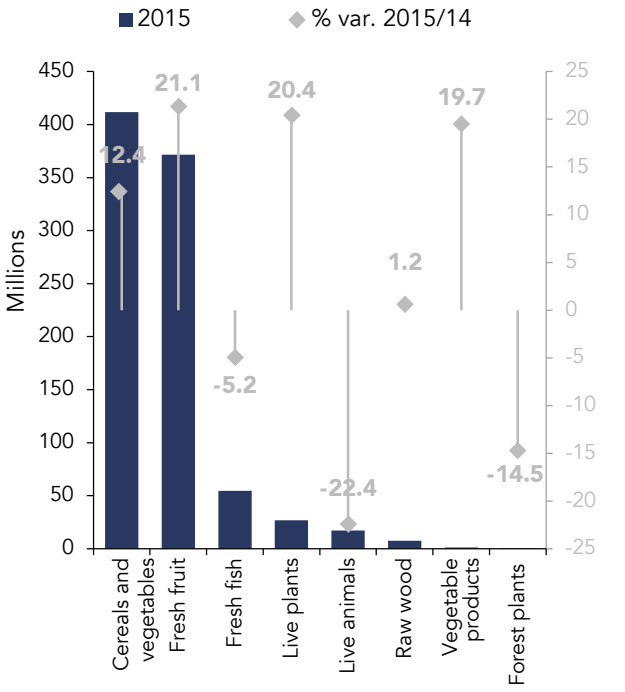
Fig. 12.3.6 – Value of exports (millions of euro) of Food Industry products according to type and % var. on the previous year. Veneto – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

The rankings of our biggest trade partners for exports are headed by Germany, the historical and outright leader with over €1.2 billion and, once again, there was an increase (+8.0%) in 2015 after general stability of 2014, followed by the United Kingdom, with €624 million and with strong growth of 23.1% between 2014 and 2015, and the United States in third place with €468 million, also with a significant increase (+20.9%). During 2015, among our leading partners, exports also grew with peaks of over 20% for Spain, Belgium, Poland and Romania. Further down the rankings, significant growth can be observed for Arab countries: Saudi Arabia (+91.7%), United Arab Emirates (+35.1%) and Tunisia (25.7%). Russia, on the other hand, suffered a dramatic fall between 2014 and 2015, bringing the reduction in purchasing from Veneto down by a further 42%, above all with regard to products subject to embargo.

Fig. 12.3.7 - Value of imports (millions of euro) of Agriculture, Forestry and Fishing products according to type and % var. on the previous year. Veneto – Year 2015

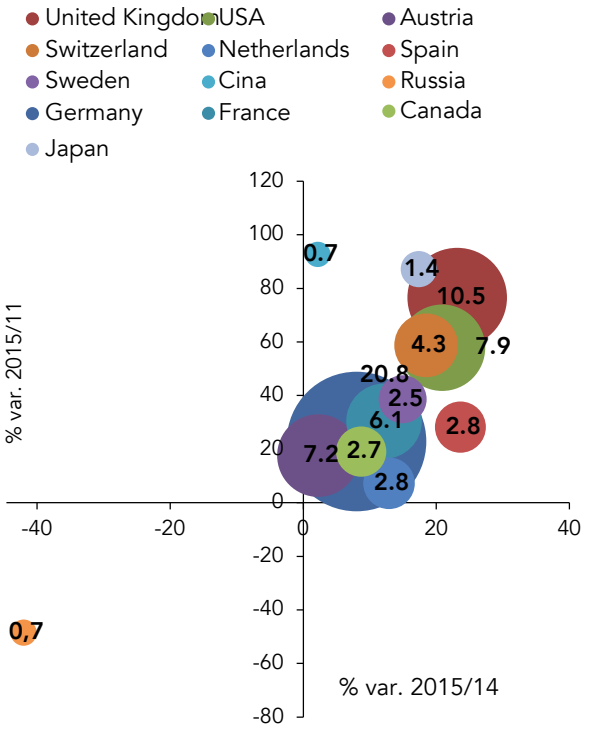


Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Aside from Russia, over the long term, all of our leading trade partners are taking great strides forward: in particular, China, Japan, United Kingdom, United States and Switzerland, with increases well above 50%. Among our top 10 partners, the

preferred products are fairly similar, insofar as, for 7 of these, the category "Wine and other beverages" far outclasses all the others. Only 3 countries (Austria, France and Spain) export the most in "Sugar, coffee, cocoa, and spices".
Thus it is wine, which represents 89% of the category "Wine and other beverages" that, for the umpteenth consecutive year, is confirmed as the overall bestseller, bringing in over €1.8 billion, an increase on the previous year of almost 10 percentage points, crowning Veneto once again the king of wines, followed distantly by Piedmont and by Tuscany, which achieved the best performance among Italian regions in terms of growth, with +18.5%.

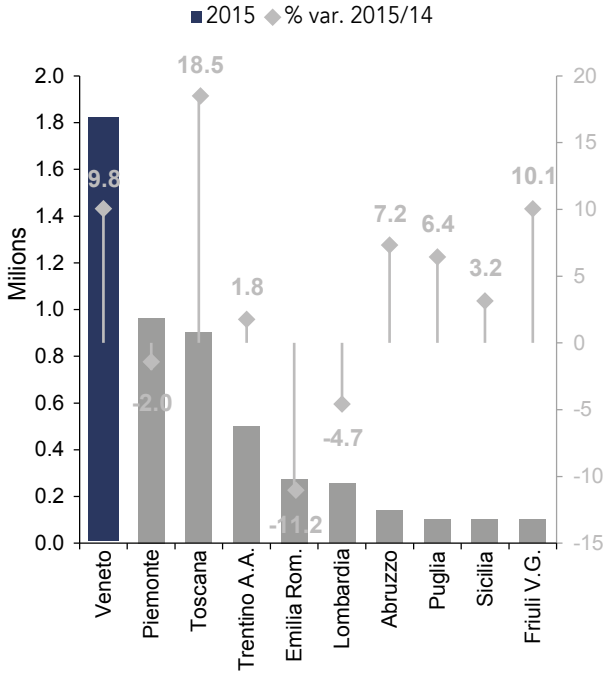
Fig. 12.3.8 - % share of agri-food exports according to leading partner country and % variation on the previous year and over the past 5 years. Veneto – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Growth was also excellent for Friuli (+10.1%), Abruzzo (+7.2%) and Puglia (+6.4%). However, the same cannot be said for Piedmont (-2%), Lombardy (-4.7%) and Emilia-Romagna (-11.2%).
With regard to our region, there is no surprise at yet another year of sensational, double-figure growth in exports in fizzy wines, which increased by 31.4% between 2014 and 2015, representing almost one third of the total value of wine exports. Unbottled wine exports fell again (-7.4%), whilst bottled wine exports increased (+3.2%), an even more determined indication of the direction taken by Veneto towards the export of quality wines.

Fig. 12.3.9 – Wine exports: value (billions of euro) and % var. on the previous year, according to region – Year 2015



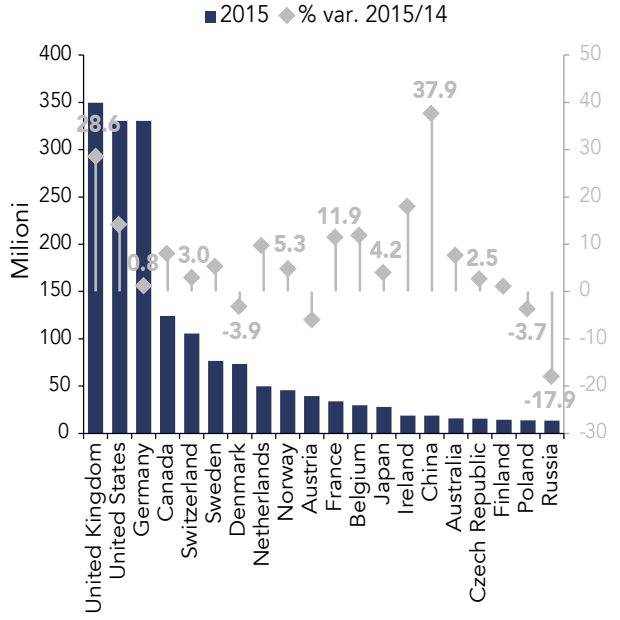
Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Stellar success for fizzy wine

Germany loses the top spot of leading trade partner, slipping down to third place, behind the United Kingdom and the United States. Growth in exports to these two countries reached almost 30% for the UK and 14.2% for the US in 2015, whilst these top three countries count for over half of the value of our exports.
Amongst our top 20 partners, growth is also good for China (+37.9%), Ireland (+18%), Belgium (+12.4%) and France (+11.9%), whilst Russia, Austria and Denmark saw decreases of 17.9%, 6.3% and 3.9% respectively. The ambassador for the success of Italian fizzy wine abroad wears Veneto colours, insofar as 56.5% of national exports of this type of

wine come from our region, with incredible growth figures: between 2011 and 2015, exports grew by 160%, with an increase from one year to the next that never fell below 25%, surpassing €500 million for the first time in 2015.
Taking into consideration our leading partners, there was significant growth in almost all exports, with the exclusion of Austria, Denmark and Russia. For certain countries, fizzy wine forms a very large part of the total value of imports from Veneto, or Veneto fizzy wine makes up almost all of imports from Italy: this is particularly the case for the United Kingdom, which, in 2012, became our biggest buyer and not only imports more than 37% of all the fizzy wine that we export around the world, but also 3 out of 4 Italian bottles come from Veneto, without considering the fact that 60% of wine imported from our region belongs to this category of wine. The love story between Veneto fizzy wine and the British grows increasingly intense and exclusive.

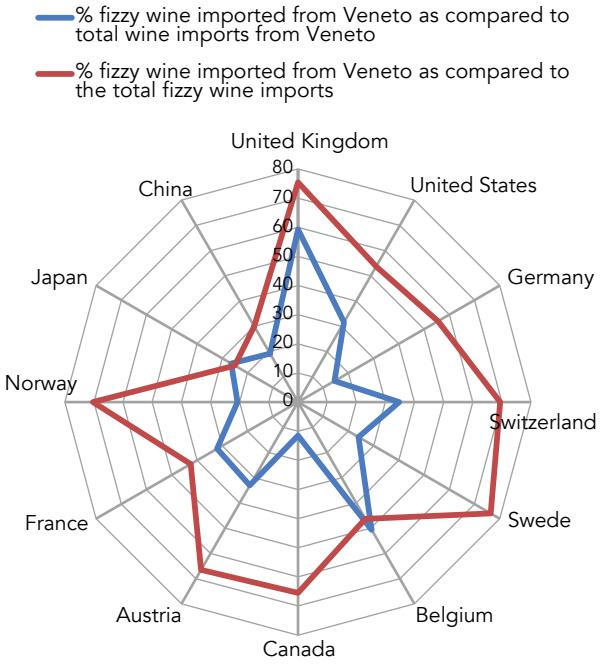
Fig. 12.3.10 – Rankings of the leading wine importers per value (millions of euro) and % var. on the previous year: Veneto – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Remaining in the UK, there was also a 60% increase in imports of this type of wine between 2014 and 2015, a five-fold increase on the value of 5 years ago. The success doesn't stop there, given that the US, in second place, reported a 32% increase (+158.3% between 2011 and 2015) and increases of over 20% are also recorded for China, Japan, Canada and Sweden, Belgium and France.

Fig. 12.3.11 - % fizzy wine imported from Veneto as compared to the total wine imports from Veneto and to the total imports of fizzy wine from Italy, according to country – Year 2015



Source: Veneto Region Data Processing, Regional Statistical System Section on ISAT data

Therefore, the most interesting global markets remain the United States, United Kingdom and China, insofar as global consumption of wine has been fixed at around 240 million hectolitres for many years and it is precisely these countries, not featuring among the biggest producers, and thus, looking ahead, needing to increase imports, that set the pace of an increasing trend: among these, we find the United States, which are indeed the biggest consumer of wine in the world, with over 30 million hectolitres drunk in 2015, with growth predictions of 1%; China, which has an estimated consumption for 2015 of 16 million hectolitres, and increase of 3.2%; the United Kingdom, which, with 12.9 million hectolitres during 2015, grew by 2.4%.