

Report on BPs on quality schemes and consumer Health in Molise Region



1. Introduction

Agriculture is a fundamental component of the Italian national economic system and it also has a significant impact on the Molise economy. Today, however, also as a result of the crises that have hit some large industrial groups in the agri-food sector and especially in view of the COVID-19 emergency, which unfortunately did not spare the sector, Molise's agri-food sector is also in a difficult situation. Nevertheless, the common commitment, shared by all those involved in the local development of the Molise territory, is to identify the critical points and support and relaunch the agri-food sector through the adoption of credible and long-term tools and projects that can give concrete answers to the operators of the supply chain.

The agri-food processing system plays a significant role in the Molise regional agricultural scenario. Based on the strong expansion that began in the 1990s, the last official data report that the complex of processing activities operating in Molise involves around 27.427 farms¹, with the VA of the food industry, equal to 114 million euros, represents 2,1% of the total regional VA (+18% compared to 2007), corresponding to 0,5% of the national VA.

Moreover, the regional offer is characterized by a high degree of distinctiveness that stems from the rich basket of quality products, closely linked to the history and traditions of the territory. However, this potential is still largely under-exploited, as demonstrated by the few products that have been awarded by the EU label. The regional basket is actually very rich and can count on 159 traditional products, most of which belong to the livestock, fresh pasta and vegetable products in their natural or processed state.



Picture n. 1_Molise territory

¹ 6th General Census of Agriculture (ISTAT), 2010

INDEX

1.	Introduction.....	2
2.	Agriculture in Molise	4
	2.1 The main agri-food supply chains in Molise	4
	2.1.1 Herbaceous cultivations	5
	2.1.2 Olive growing	6
	2.1.3 Viticulture and wine	6
	2.2 The zoo-technical productions	7
	2.2.1 Meat	7
	2.2.2 Cheese	8
	2.2.3 Honey	8
	2.3 Organic farming production	8
3.	Quality schemes in Molise.....	9
	3.1 DOP and IGP products	9
	3.2 DOC and IGP wines	10
	3.3 Tintilia del Molise DOC – indigenous grape	10
	3.4 Traditional Food Products	10
4.	Molise Regional Policies on quality and on consumer health.....	11
	4.1 Molise Region and the “Food Education Programme as a Health project”. School Year 2012 – 2013	12
	4.2 Results	15
	4.3 Molise Region and the “School Fruit Programme”	18
	4.4 Molise Region and the Communication Campaign “Molise, ANOTHER LAND”	19
5.	References.....	20
6.	WEB - References	20

2. Agriculture in Molise

Despite a constant contraction in recent years, the agricultural sector accounts for 5,3% of regional added value, compared with a national average of 2,6%. If the data for agricultural and forestry production are aggregated with those of the agri-food processing sector, the whole system participates for 6,5% of regional added value. These data are much higher than those of the agri-food system at national level (3,9%) and further underlines the regional vocation for food production. This value has increased, even if slightly, in recent years. Alongside the significant structural and organisational limitations of the regional agricultural system, there have been encouraging restructuring and modernisation processes, especially in recent years, which have been encouraged and supported by the regional government.

The regional value added (VA) of agriculture has greatly increased in recent years (+23,1% compared to 2007). Though maintaining a rather high share compared to the other sectors (equal to 152% of the Italian average), it represents just 1% of the national VA.

The utilized agricultural area (UAA) by Molise is 106.653 ha. The total number of registered farms is 27.427 but the farm enterprises are 4.527; they have an average size of 7.5 ha and are considerably decreasing compared to 2009 (-11,9%). Moreover, only 7% of farms are run by young farmers, i.e. aged under 35. The VA of the food industry, equal to 114 million euros in 2018, represents 2,1% of the total regional VA (+18% compared to 2007), corresponding to 0,5% of the national VA². However, the weight of the population employed in agriculture is high, equal to 8,7%, whereas the weight of the food industry is equal to 3%, both values being above the national average.

2.1 The main agri-food supply chains in Molise

The major typical products of Molise are attributable to the dairy and olive-olive-oil food chains. Both chains have their roots in past ages, as confirmed, respectively, by the continuation of age-old transhumance practices and the presence of a regional park of ancient olive trees. These traditions result in some products of very high commercial reputation like *Caciocavallo* and *Stracciata di Agnone* (and/or of Alto Molise), *fiordilatte mozzarella of Matese* (with excellent products also sold at *Eataly*³) and the extravirgin olive oil of Frentana area (within which initiatives for establishing a bio-district have recently been carried out), the uniqueness of which is especially related to the use of autochthonous olive varieties like *Gentile di Larino* and *Rosciola di Rotello*. The cereal chain is another important food chain of Molise. It is characterized by a lively activity of restoration and enhancement of obsolete varieties (the so-called ancient grains including, among others, *Senatore Cappelli*, *Saragolla* and *Agostinello*), often accompanied by the re-introduction (in rotation) of local biotypes of grain legumes, among which the white *beans of Acquaviva d'Isernia* and the *lentil of Capracotta* are worth nothing. There is an important producer of pasta at international level, *La Molisana*, that is investing in innovation inside the grain chain. Finally, the sub-chains related to some minor excellent food products like *tomato of Montagano* and *organic apples of Castel del Giudice* are worth mentioning.

In the past, the processing of food and products deriving from agriculture were considered agricultural activities, now instead they are classified as manufacturing activities. Manufacturing activities are, for example, extracting ones (oil from olives, wheat into flour, beet sugar into sugar), fermentation (milk into

² National Institute of Statistics (ISTAT), Agricultural enterprises in Italy in the ASIA Register. Year 2018.

³ The Eataly brand was created by bringing together a group of small companies working in the various food and wine sectors.

cheese, grapes into wine)¹⁰ but since they are strictly connected and inter-dependent to agriculture, they need to be taken into consideration (also because they really important to regional economy).

According to the latest Manufacturing census' data, food industry's added value in Molise was above 100 million Euro in 2011 and represented 12,6% of the total manufacturing regional industry. There are 560 enterprises with 3,020 people employed (30% of regional manufacturing work force) mostly of which are "individual enterprises" (55%) and a low number of limited companies (15%).

Activities, employing more work force, are baking and pastry, cheese, meat (mostly chickens) and pasta productions. Of those only 3 enterprises (chicken processing, sugar extraction and fishing activities) can be considered industrial, with a work force which varies between 100 to 250 units; other enterprises are mostly artisan with an average of no more than 9 units⁴.

As far as export is concerned food industry behaves pretty well. In 2010 the value of export was above 45 million Euro against an import value of about 37 million Euro. In 2012, the value of exported goods raised to 60 million Euro, against an import value of about 40 million Euro (a 20 million Euro positive balance). Transformed agricultural products (pastas, wines, sweets, oil) have instead performed really well, with a continuous growth of exchanged quantities which has given a positive balance for the entire food industry.

A study conducted by Bank of Italy "Regional economies. The Molise economy - Economic update" in 2020 confirmed that for the foreign trade, in the first half of 2020, the value of Molise's exports at current prices grew by 30,2% compared to the same period of the previous year. The increase was mainly driven by sales in the first quarter of the transport equipment sector (including parts and engines) but for all other sectors foreign sales grew by 7,1%, precisely because of the good performance of food products, which grew by 4,7%.

2.1.1 Herbaceous cultivations

On Molise territory, the most widespread culture is durum wheat. It is present on the entire regional territory both on fertile lowlands and on high hills and mountains. The most selected seeds are *Aureo*, *Svevo*, *Iride*, *Claudio*, *Saragolla* and *Simeto*. Sowing time is in autumn, after sunflowers or chickpeas, and in less fertile areas after a fodder herbage. Often the ringrano technique is used (cultivation of wheat over wheat, repeated for 2 consecutive years on the same land). Harvest periods depend on altitude; however, they fall between June and July. Production output is around 4.000-6.000 kilos per hectare. Wheat is destined to production of semolina for pasta and it is mostly transformed in molisian mills and pasta factories. Production of soft wheat is very limited and it is destined to farm's own consumption. Also, a very important production is barley for breweries and animal feed factories. Scarlet is the most cultivated variety; cultivation techniques are similar to durum wheat ones and production output is between 5.000 and 7.000 kilos per hectare.

In the past sunflower and beet sugar cultivations were very popular, however today those cultures have reduced dramatically due to a decline in selling prices. Instead onion and, lately, chickpea growing have become more and more popular. Chickpeas especially are preferred by farmers as they don't need too much care, they hold out against parasites, give a good output (1.500-2.500 kilos/hectare), hold a good selling price and have a good demand by consumers.

Tomato cultures, although in decline, are still important. Its cultivation is carried out through transplant in April and mechanised harvest in August with an output of 60.000-100.000 kilos per hectare. Production is

⁴ Molise-Montenegro Cross-border Cooperation, ARACNE editrice int.le S.r.l., 2015

destined to canning industry, mainly tomato sauce. Cultivation of potatoes, spinaches and fennel is also pretty popular, with the last one harvested twice.

2.1.2 Olive growing

Olive growing in Molise has age-old origins and oil quality has been appreciated and celebrated by poets and writers since the Roman Empire era. Today the olive tree, with an area of about 15.000 hectares, represents over 70% of regional tree farming sector with a presence in about 74% of farms (both as a specialised or mixed culture). Considering the different climates of the region, this large diffusion has been possible thanks to many indigenous cultivars which allowed the adjustment of the plant to lowlands and/or mountains. Of the 20 local cultivars, the most important are *Gentile (Gentle) of Larino*, *Oliva nera (black olive) of Colletorto*, *Aurina of Venafro* and *Rosciola of Rotello*, with the first one being the most cultivated. Among non-indigenous cultivars, Lecciso is very widespread.

Molisian olive growing is almost entirely oriented towards the production of olive oil, which has got high quality levels and sensory characteristics, and that's why since 2003 it received the Protected Origin Denomination (*Denominazione di Origine Protetta – DOP*) and then the recognition of extra-virgin olive oil protected by the European Union.

Olive groves have different growing and implant characteristics according to territories. The areas with best potential are those located in “basso Molise”¹¹ (South of Molise), in Campobasso province and in the Venafro plain, in the Isernia province. In those areas olive growing is a specialised culture, with conic and poly-conic vase growing forms, which lets more sunlight to come through, reduces production times and allows mechanical harvest with huge costs reduction. Even implants orders are reduced, with plants disposed in squares of 6 by 6 meters, and an investment of about 300 plants per hectare. In those olive groves production is getting close to 30 kg of olives per plant.

In areas with less potential (or more difficult) we can find above all old groves, with big plants and a density which often stands below 100 units per hectare.

Olive picking (which is mechanised in specialised cultures) happens in autumn with some monthly differences due to altitude and season. Sometimes though some farmers delay picking to increase oil production to the detriment of quality. Due to this bad practice oil output can stand between 12% (early picking) and 18 (late picking). However today more and more farmers tend to get quality olives picking them in the moment the colour of the olive starts changing from green towards red-violet.

In 2010 olive oil's regional production was about 6.250 tonnes. The strong presence of olive groves opened the gates to a widespread presence of oil mills with 120 plants, many of which have bottling facilities. Most of them still use the traditional pressure extraction system, but all the new plants have modern systems which use centrifugal extractors, giving an olive oil with refined sensory characteristics.

2.1.3 Viticulture and wine

Molisian viticulture has an important cultural and economic role in the region even though quantities are moderate. This type of culture is almost entirely destined to the production of wine.

Among agricultural and food products, wine represents better than other products the characteristics of the territory of origin. And Molisian wines (especially Protected Denominations) represent one of the biggest seller as far as foreign commercial trade of agricultural products is concerned. For this reason in the last years this sector started a deep transformation aimed to improve quality and typicality. Looking at the last 2

General Census of Agriculture (2000 – 2010) we can find the following informations: In 2000 there were vineyards in about 12.000 farms with a total extension of almost 6.400 hectares. After ten years the number of farms had become 6.000 keeping a similar total extension. Many small vineyards have been eradicated, mostly in areas with less potential, but new specialised and modern vineyards have been created in areas with more potential (Low hills near the Biferno and Volturno rivers). We can mostly find black berries' wine varieties (79%) like *Montepulciano* (69% of the black variety and 49% of the total), then *Cabernet Sauvignon* and *Sangiovese*. Among white wines, the *Trebbianos* (from Abruzzo or Tuscany) are the most popular.

In the last 15 years, *Tintilia del Molise*, an indigenous black wine variety, has been recovered and revalued. Probably of Spanish origin, this variety was introduced under the rein of the Bourbons and acquiring, during the years, a specific genetic identity. During the sixties it has been replaced by more productive varieties however nowadays its typical sensory characteristic, which holds the history, climate and tradition of the region, gained *Tintilia del Molise* a Controlled Origin Denomination (*Denominazione di Origine Controllata* – DOC) badge. Next to *Tintilia*, in Molise we have three more DOCs (*Molise*, *Biferno* and *Pentro*) and 2 IGT - *Indicazione Geografica Tipica*/Typical Geographic Indication (*Terre degli Osci* and *Rotae*).

Among used cultivation system, the horizontal one (big tent) is the most popular; newer cultures tend to use instead a vertical system which eases mechanical picking. Average outputs hinge on wine varieties, moving from 8.000 to 14.000 kilos per hectare. In 2010 271.000 hl of wines were produced with an 18% increase in 2012 (319.000 hl) according to ISTAT and *Federdoc* data. The sector dynamism is also showed by the presence of about 20 wine making facilities on the regional territory, 2 of which are wine cooperatives⁵.

2.2 The zoo-technical productions

In the last official general census of agriculture in Italy (6th) held in 2010, it was found that in Molise the 2010 zoo-technical productions were prevailing in the agriculture sector with a value of over 173 millions Euro, representing 43,7% of the regional industry. Of this gross production value, 72% was coming from meat, 22% from milk and the rest from eggs, honey and non-edible zoo-technical products.

2.2.1 Meat

About 4.000 breeding farms are present on Molise territory and it is important to underline that, compared to the previous general census of agriculture held in 2000, there has been registered a percentage of decrease of 57% when the official breeding farms were 9.300. The main productions are related to the cattle breeding, used both for the slaughtering and sale of meat and for milk production. Especially for this type of production, the most popular breed is *Frisona* (over 50% of cows) followed by *Pezzata Rossa* (24%) which can be also used for meat production and *Bruna*⁶. Milk production⁷ in 2010 was slightly above 73.000 tonnes. This quantity declined in the following years (due to a decline in cattle numbers) reaching in 2013 68.000 tonnes (-7%). The entire milk production is given to local cheese and dairy factories which use it mostly for the making of cheeses.

In Molise there is also a presence of sheep farming, really much reduced during the past years (2000-2010 period: -64% of farms and -20% of animal units). Meat production is the main purpose and lambs are usually

⁵ Molise-Montenegro Cross-border Cooperation, ARACNE editrice int.le S.r.l., 2015 (pp 87-88-89).

⁶ Source: National bovine registry – 2010

⁷ Source: CIAL, 2010

slaughtered when their weight is about 14-18 kg. Milk is directly transformed in cheese, in factories close to farming facilities.

A different breeding system is used for the chicken's farms as an intensive raising model has been encouraged in the last few years. Chicken raising counts 563 farms with a number of units above the national average and among the first seven Italian regions. Farming is focused on broilers, with a limited number of egg production. According to 2010 data, Molise produced about 20 millions units with a total live weight of 5.250.000⁸ kg. Almost all these businesses are run under an agistment contract with big specialised companies. The farmers just need to raise the chickens, the big companies provide the animal feed, medical aid and technical assistance. At the end of each cycle those big companies buy at a pre-fixed price the chickens which will be then slaughtered in their facilities and sold under their own brand name.

2.2.2 Cheese

Cheese, together with olive oil and wine, represents the production of excellence of the region. History and tradition of our territory foster the production of quality cheeses much appreciated by consumers. In Molise there over 80 cheese factories. Only few of those have a big dimension, with almost entirely mechanised processes. Many in fact are small and using artisan techniques, collecting and transforming few quantities of milk (200 kg a day) from nearby farms. Most of the milk comes from cows and used almost entirely for pasta filata (spun paste) cheese production. There are several regional dairy products, also classified as traditional food product such as, among the others, "*Mozzarella di bufala campana*", "*Pecorino di Capracotta*", "*Scamorza molisana*", "*Stracciata di Agnone*", "*Treccia di Santa Croce di Magliano*" and "*Caciocavallo di Agnone*".

2.2.3 Honey

In Molise, the abundance of many botanical species, their gradual flowering time due to altitude and biodiversity, clean environment and low use of pesticides create the ideal condition for bee-keeping. However, bee-keeping is not so popular yet, even though it is possible to get good productive and economic results. There are about 6.000 hives and about 100 bee-keepers, 57% of which owns an average of 30 hives and 10% of which owns farms with over 250⁹ hives. It is possible to obtain various types of honey (millefiori, acacia, sunflower, chestnut). A recent study from ARSIAM (Cassetta – Mottola, 2013) shows how with 250 hives it is possible to obtain a Net Income of about 25.000 Euro/year making it a possible main farming activity. With 100 hives instead is possible to get a Net Income of about 13.000 Euro/year making it a possible additional farming activity.

2.3 Organic farming production

Organic farming is a voluntary, certified and regulated agri-food production system. It means that the farmer freely decides to convert his farm to this method and that an independent third party (authorised control body) declares that the products thus obtained and the processes adopted comply with the rules of EU regulations and national laws. Organic farming, therefore, is a valid tool for the enhancement and protection of our agri-food products, as it gives them special characteristics and makes them visible on the market, differentiating them from similar products.

According to the 2010 census, in Molise there are 194 biological farms with a UAA of 4.871,10 hectares (about 2,5% of total UAA) and most of them are located on the hills (75% of farms, 85% of land). Certified cultivations are olive groves (487 hectares), vineyards (330 hectares) and fruit tree farms (222 hectares). There are also

⁸ Source: Agristat, 2010

⁹ Source: Notification of hive's numbers by members of AraM ad APAM - 2011

20 animal husbandries, half of which practises cattle farming. Biological products are facing a growing demand in the last few years as consumers associate the biological method to the idea of genuine and controlled products¹⁰.

However, the number of “biological” farms and lands is very low in Molise (and Italy too) even though in the region it is easy to avail of clean environment and almost unchanged ecosystems rich in biodiversity. According to Rural Development program 2014-2020 this low numbers are caused by high costs of certification, excess of bureaucratic procedures and a bad-organised market.

Molise Region, through the Regional Plant Health Service, contributes to the correct application of the organic production method through the control of regional agricultural operators and their registration in the regional lists of organic operators deemed suitable, the supervision of Control Bodies, monitoring.

3. Quality schemes in Molise

According to EU guidelines n.1.151/2012, Molise has 5 DOP *Denominazione di Origine Protetta* (Protected Origin Denomination) products and 1 IGP *Indicazione Geografica Protetta* (Protected Geographic Indication); as far as wines are concerned it has 4 DOC areas and 2 IGT. In addition, the Agriculture Ministry added 159 molisian products in the Traditional Food Products (PAT)¹¹ list.

3.1 DOP and IGP products

The 5 DOP products are:

- 1) “*Molise olive oil*” which is exclusively from Molise and can be only produced in the Region. Olive oil Molise obtained its DOP certification in 2003. Its sensory characteristics are a colour which changes between yellow and green, fruity notes and a delicate sour taste with a final almond aroma.
- 2) “*Caciocavallo Silano*” is not only a Molise regional product and includes many other regions (Campania, Basilicata, Puglia and Calabria). The production of Caciocavallo Silano DOP in 2010 was slightly over 100.000 kg with only 3 producers¹² residing in the region. Production has progressively gone down to 70.000 kg in 2013. In this case the reasons may be found in the convenience for molisian producers to sell their product as “*Caciocavallo Molisano*” which doesn't have a EU denomination or identification but it is preferred by local consumers.
- 3) “*Mozzarella di Bufala Campana*”. This famous dairy product, along with the following “*Ricotta di Bufala Campana*” is produced in a low quantity only in the Isernia Province and the main production is in Campania and small parts of Lazio and Puglia.
- 4) “*Ricotta di Bufala Campana*”.
- 5) “*Salamini Italiani alla Cacciatora*”. This salami product is produced in 11 different Italian regions (Abruzzo, Emilia Romagna, Friuli Venezia Giulia, Lazio, Lombardia, Marche, Piedmont, Tuscany, Umbria, Veneto, Molise) but it should be underlined that here are no producers of *salamini italiani alla cacciatora* DOP in Molise.

The IGP “*Vitellone Bianco dell'Appennino*” (Veal) includes 3 different cattle breeds (*Chianina*, *Marchigiana e Romagnola*) and it is common to 8 regions (Emilia Romagna, Tuscany, Marche, Abruzzo, Campania, Lazio, Umbria, Molise). Of those 3 different cattle breeds, *Marchigiana* is the most widespread in Molise with over

¹⁰ Source: Bioreport 2011. Biological Agriculture in Italy – National Rural Network

¹¹ Traditional Agricultural Products are regulated by Legislative Decree n. 173/1998

¹² Caciocavallo Silano DOP Consortium

4,000 units, *Chianina* is rare and *Romagnola*¹³ is almost non-existent.

3.2 DOC and IGP wines

Molise Region has 4 DOC wines and the data for the grape harvest, shows that DOC and IGT vineyards amount to 746 hectares (12% of regional viticulture) a third of which destined to white berry grapes and 2/3rds to black berry grapes¹⁴.

The 4 DOC wines are:

- 1) "*Biferno*"
- 2) "*Molise del Molise*"
- 3) "*Pentro d'Isernia*"
- 4) "*Tintilia del Molise*"

The 2 IGT wines are:

- 5) "*Oscote Terre degli Osci*"
- 6) "*Rotae*".

DOC and IGT grape production were almost 11.000 tonnes and wine production were close to 82.000 hl, 25% of which is DOC and 75% IGT. Unfortunately, like the DOP olive oil, only 15% of the produced wine has been sold as DOC certified and 0% as IGT certified. Molise DOC is the most sold wine followed by Biferno DOC. Production of Tintilia del Molise is still a low (44 hectares for 1.600 hl) but its vineyards and wine production are increasing showing the potential of this indigenous grape.

3.3 Tintilia del Molise DOC – indigenous grape

The DOC "*Tintilia del Molise*" is one of Molise's most recent designations, approved at the end of 2011, almost 30 years after the region's first two DOCs. The types of wine included in this denomination are varietal reds based on the *Tintilia* grape, a native black grape of Molise. Molise is the second smallest region in Italy and also in terms of wine the production is very limited. For this reason, the number of DOC designations in the region is also limited to four. The *Tintilia* is a black grape variety with ancient and uncertain origins and was until modern times the most widespread variety in Molise. Because of its low yields, the cultivation of *Tintilia* was largely abandoned after the Second World War. It was only in the 1990s, thanks to some more far-sighted producers and the introduction of the regional DOC '*Molise*' in 1998, that *Tintilia* began to receive the attention it deserved, but despite this, wines of this type are still relatively rare. Wines made from *Tintilia* are characterised by their intense ruby red colour, they are structured, with evident tannins. Their alcohol content is high, and the nose is fruity and spicy, with hints of plums, black cherries, liquorice and black pepper.

3.4 Traditional Food Products

According to the Article 3 of Ministerial Decree No 350 of 8th September 1999, traditional agri-food products, to be included in the regional and national list are those whose processing, preservation and maturing methods are practised in the territory in a homogeneous manner and in accordance with traditional rules, for a period of not less than twenty-five years. Those products are registered in a list held by the Ministry of

¹³ Source: National Bovine Registry

¹⁴ Data 2013, Molise IGT and DOC wines control entity, c/o Camera di Commercio in Campobasso

Agriculture and are part of our national cultural heritage. The updated number of Traditional Molisian Food Products is 159¹⁵ and among them, some products are more famous than others such as follows:

- 1) **Meat products:** the most famous are "*pezzata*" (pieces of sheep meat cooked in a copper pot); "*misischia*" or "*muscisca*" (sundried goat or sheep meat, finely cut and warmed in a pot) and "*signora*" (a type of salami).
- 2) **Cheeses:** we can find the famous *caciocavalli*, "*stracciata*" (a type of *mozzarella*) and "*treccia di Santa Croce di Magliano*" (a pasta filata cheese which looks like a stranded rope, 100 cm long and 20 cm large).
- 3) **Pastas and pastries:** we can find "*ravioli scapolesi*" (big size pasta filled with beets, potatoes, meat, sausages, cheese and eggs); "*pannocchio*" (a corn flour based pastry); "*pandolce del molise*" or "*milk pan*" (a type of cake); "*calzone di San Giuseppe*" (a pastry shaped as a half-moon filled with a chickpea, almond, honey and other aromas cream); "*Ostie di Agnone*" (a not consecrated host with two wafers holding a crunchy filling made up of nuts, honey and chocolate); "*uccelli*" (another pastry shaped as a half-moon filled with coffee, honey, almonds and other type of aromas) and "*Confetti ricci*" (a type of sugared almond).
- 4) **Vegetable products** we can find some type of local beans (of "*Paolina*" or of "*Acquaviva d'Isernia*") with a soft structure which allows a shorter cooking time; "*mela zitella*" (flat, with a crunchy inside, slightly acid); "*cipolla d'Isernia*" (big and white type of onion), "*pomodoro di Montagano*" (tomato), "*lenticchia di Capracotta*" (lentils), *il tartufo bianco e lo scorzone* (white and black truffle).

4. Molise Regional Policies on quality and on consumer health

Studies in the field of nutritional education have shown that only telling young people what is "good for them" or what is "forbidden" does not produce effective results, nor does focusing too much on the caloric or protein aspects of food, produce real and lasting changes in children's habits.

It is more effective to communicate to young people the concept of food in its broadest and most articulate sense, to show them the path that the food takes from the land (or from the stable) to the table, the transformations and hygiene dangers it may encounter along the way, how it is preserved, the great importance of seasonality and sustainability, and to show them the places of production and the segments of the entire supply chain. These are elements that contribute to forming a solid food conscience, which goes beyond the wellbeing of the individual and also involves the local community and the environment.

Starting from the awareness of educating citizens from an early age in the concepts of proper nutrition is a quite important matter, Molise Region promoted different initiatives on this topic, involving the schools and the local communities.

¹⁵ Twenty-first revision of the list of traditional food products

4.1 Molise Region and the “Food Education Programme as a Health project”. School Year 2012 – 2013

Molise Region, General Directorate for Health, with general determination no. 504 of 30.5.2012 approved the 2012-2013 regional guidelines for the "Food Education Programme as a Health project", defining the guidelines and strategies and identifying the priority themes, with particular reference to knowledge of the Molise agri-food system, the promotion of the concept of total food quality, the sensory approach and awareness of the food-health relationship to encourage the adoption of correct and conscious food behaviour.

The general objective of the project, developed by ARSIAM (Regional Agency for Agricultural Development and Innovation in Molise, now denominated ARSARP - Regional Agency for Agricultural, Rural and Fisheries Development), in line with regional planning, was to educate young people in healthy and correct nutrition, through the choice of safe and quality food, the perception of sensory characteristics, the knowledge and reaffirmation of food models linked to their roots, the understanding of the close links between food, agriculture and the territory and, finally, to promote conscious and environmentally friendly eating behaviour.

Simultaneously to the specific educational aims, a cognitive survey was carried out, through the administration of a "Food Diary" and a questionnaire, to know the alimentary habits of Molise's children in order to support future corrective interventions.

For the 2012 - 2013 school year, the training activities were aimed at fourth grade and fifth grade students, as in these age groups, the children begin to develop a food consciousness and are more sensitive to educational interventions.

Six school circles were involved, Campobasso, Termoli (CB), Riccia (CB), Bojano (CB) and Isernia, with 25 classes and 510 pupils. In each class, the programme was carried out in 12 hours of theoretical-practical lessons, 4 hours of sensory workshop and a guided visit to Molise's agricultural and agri-food companies.

The project was divided into seven training phases and a key sentence was assigned to each phase, summarising the content and stimulating the curiosity to learn. The communication phase also made use of modern information technologies to facilitate the transmission of messages, to enhance interactivity and to produce suitable and inexpensive teaching and dissemination materials.

The seven phases were conducted as follows:

a) Before it is food

In this phase, the training activities aimed to make young people aware of understanding the agri-food chain of the main and most important foods (milk, meat, fish, cheese, eggs, cereals, vegetables, fruit, honey, ice cream and chocolate). The cultivation and breeding cycles were illustrated, to highlight the value of seasonal production, and the main techniques in use, to help understand the importance of a healthy and correct use of resources, for the benefit of human health and the environment. Food processing and preservation was also addressed, to highlight the importance of food safety, traceability and distribution.

b) I belong to it

This intervention was dedicated to the knowledge of typical regional products in order to increase the link with their roots and boost local economies.

c) I like it

Over time, the use of the five senses as a means of getting to know food has gradually diminished, undergoing a sort of regression generated, almost always, by the frenetic and fast rhythm of the life. Thus, that kind of "shallow" knowledge of food, that transformed a nutritional need into an experience of pleasure, has been lost. Food is not just to be eaten, it is to be tasted, and from the development of the sensory approach comes the development of quality, health, production, the market and life as a whole.

On the basis of these considerations, two meetings were dedicated to the Sensory Analysis Laboratory, held in the classrooms, to educate the pupils to recognize the tastes, smells, aromas, visual perceptions and tactile suggestions of food.

The students carried out tests to recognize the four basic flavors (sweet, salty, sour and bitter); sorting tests; tests on smells and aromas. The gained knowledge was then applied to the analysis of some types of honey and chocolate, with a very flattering response and involvement from the children.

d) You help me

The length and quality of life depend to a large extent on nutrition, which is the first real source of prevention and defense. The choice of food we use is the basis of complete human development, both physical and mental. On the other hand, an unbalanced or incorrect diet can lead to conditions of disorder or actual disease. Surveys carried out over the last twenty years show an increase in the number of young people who are overweight or have severe obesity problems. In Molise, according to a 2010 study (its title was *Okkio alla Salute*), 26% of children between the ages of eight and nine are overweight, compared with a national average of 23%. This issue was also confirmed by our experimental survey, conducted on children who participated in the project. The prevalence of overweight and obesity among young people is particularly worrying when one considers the future social and health implications of the foreseeable increase in chronic degenerative diseases. We should also be concerned about those forms of eating disorders that occur especially in adolescence, such as bulimia and anorexia, caused by psychological problems that produce a pathological relationship with food.

In order to face these phenomena, it is essential to intervene with appropriate actions to stimulate pupils to reflect on food, to understand why we need food, to know that we need different foods and to critically evaluate the effects that food has on the body.

At this stage, training interventions aimed to transfer knowledge about nutritional physiology, the composition and function of food and to encourage optimal and balanced structuring of daily meals.

e) I recognise you

A lack of knowledge about the information on food labels, coupled with "uneducational" advertising campaigns, often leads to purchasing and consuming food incorrectly or carelessly. In order to increase awareness of the choices made, it is necessary to inform young people, who will be the consumers of the future, of the elements and symbols that characterize these products, the certifications and brands that guarantee their quality.

For these reasons, the products and labels of the main foods on the market were brought to classes, teaching the "tricks" and methods for understanding the acronyms and symbols, which are all too often unclear and sometimes insidiously indecipherable.

f) I'll visit you

Nowadays, young people, although living in rural areas, know very little or only superficially about the world of agriculture. They are often unaware of the food processes that are the basis of agri-food production; most of the pupils have never seen where and how the food is obtained or processed.

For these pupils, the food comes from the supermarket or, at best, from industry. One product is as good as another, regardless of "how" and "where" it was produced. What counts in their choices is the eye-catching packaging, the bombastic advertising or the group trends. Ignoring or not being able to distinguish the value of one product from another is often due to never having visited a farm or a stable. These children don't have observed the different farming conditions or the possible modes of production: for example, a cow fed in the pasture and free to move, a free-range chicken tumbling in the barnyard compared to one reared in a battery; the goodness of a fruit freshly picked from the tree compared to one that has undergone numerous defence and conservation treatments. Entering a farm and understanding the role of agriculture in the ecosystem certainly helps to improve consumer choices and dietary styles.

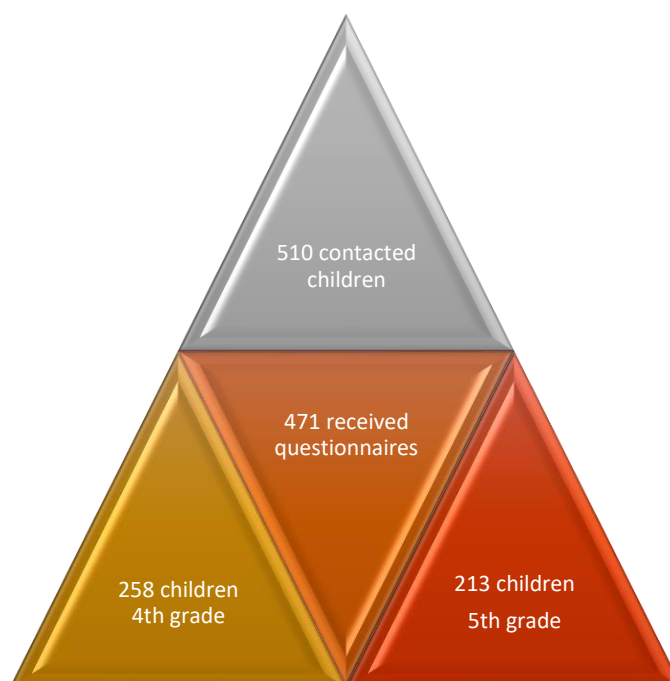
For these reasons, the children have been directly taken "into the countryside", organising guided tours of the stables, dairies, charcuterie factories, pasta factories, oil mills, confectionery factories, beekeeping companies and canning and jam-making factories. The kids were really enthusiasts for these "findings".

g) I'm telling you

In order to involve the pupils more and more and to make them the protagonists of the educational pathway, a competition with prizes was organised among the participating classes. 23 out of 25 classes took part, submitting research topics, fantasy stories, drawings, handicrafts, old photos, curiosities and traditional recipes. The produced works were all very beautiful, interesting and valuable and showed great commitment, a good level of knowledge, wonderful creativity and excellent technical mastery. The pupils and teachers of the first 6 winning classes have been awarded with a medal, while their institute have been received a cash prize to be used for future school activities.

Simultaneously to the activities of the nutrition education project, an experimental research was carried out in March 2013 with the aim of deepening the knowledge about the nutrition of the youngest children in order to better calibrate future interventions of an educational nature. Specifically, the survey aimed to find out about the eating habits of the children interviewed and the role of the five senses in food choices.

A food diary and a structured questionnaire delivered to the children in class after a brief explanation of the rules for filling it in and returned anonymously in class were used as survey instruments. A total of 510 children were contacted and 471 questionnaires were returned. The children attend classes 4 and 5 in elementary school in 10 schools belonging to 6 Institutes located in the municipalities of Campobasso, Bojano (CB), Riccia (CB), Termoli (CB) and Isernia.



Picture n. 2_ Research with n. of administered questionnaires

4.2 Results

Numerous insights emerged from the analysis of the data especially for snack consumption, food preferences and the children's use of their five senses to describe and judge liked foods and avoided foods. These data also revealed whether there are some senses that guide children's preferences more than others and how children have described foods using their sensory perceptions.

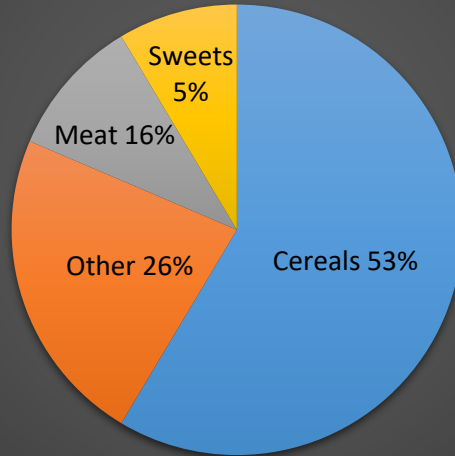
Concerning the afternoon snack, two interesting data emerged from the analysis of the Food Diaries:

- 1) A significant number of children (20% of the total) do not consume the afternoon snack;
- 2) The correlation between the snack consumption and the body weight evaluation (made through the Body Mass Index or weight/height²) which shows that, contrary to what one might think, more children (more than 30%) at risk of being overweight or obese, that is with a Body Mass Index higher than about 19, do not consume the afternoon snack.

An analysis was then carried out, distinguishing between preferred and disliked foods, which resulted in a "ranking list" of both of them.

Among the preferred foods there are foods belonging to the cereal group and the meat group with 53% and 16% of the preferences respectively. This is actually surprising as it was expected that confectionery would be on the podium or in the top positions (but they only got 5% of the preferences).

**Pupils participating in the project by type of preferred food.
 Molise Region - school year 2012/2013 (Percentage values)**

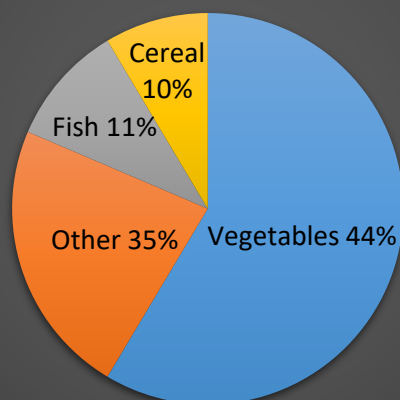


Picture n. 3_Percentage values of preferred food

The cereal category is mostly constituted by Pasta (64%) and Pizza (25%) and among the various types of pasta (described very accurately by the children) at the first places we find lasagna, pasta with sauce (meat sauce, tomato sauce), homemade pasta (cavatelli, gnocchi, etc.) that especially in Molise are typical of convivial moments (festivities, Sunday lunches, etc.). This further demonstrates that food cannot be considered only as a nutritional activity but must be taken into consideration also and above all in its relational and sharing aspects (first and foremost within the family).

With regard to the disliked foods, in the first places we find vegetables (44%) and with a slightly lower percentage we find fish products (11%). Among the vegetables, the least liked were "broccoli" and "cauliflower" with about 34%.

**Pupils participating in the project by type of disliked food.
 Molise Region - school year 2012/2013 (Percentage values)**

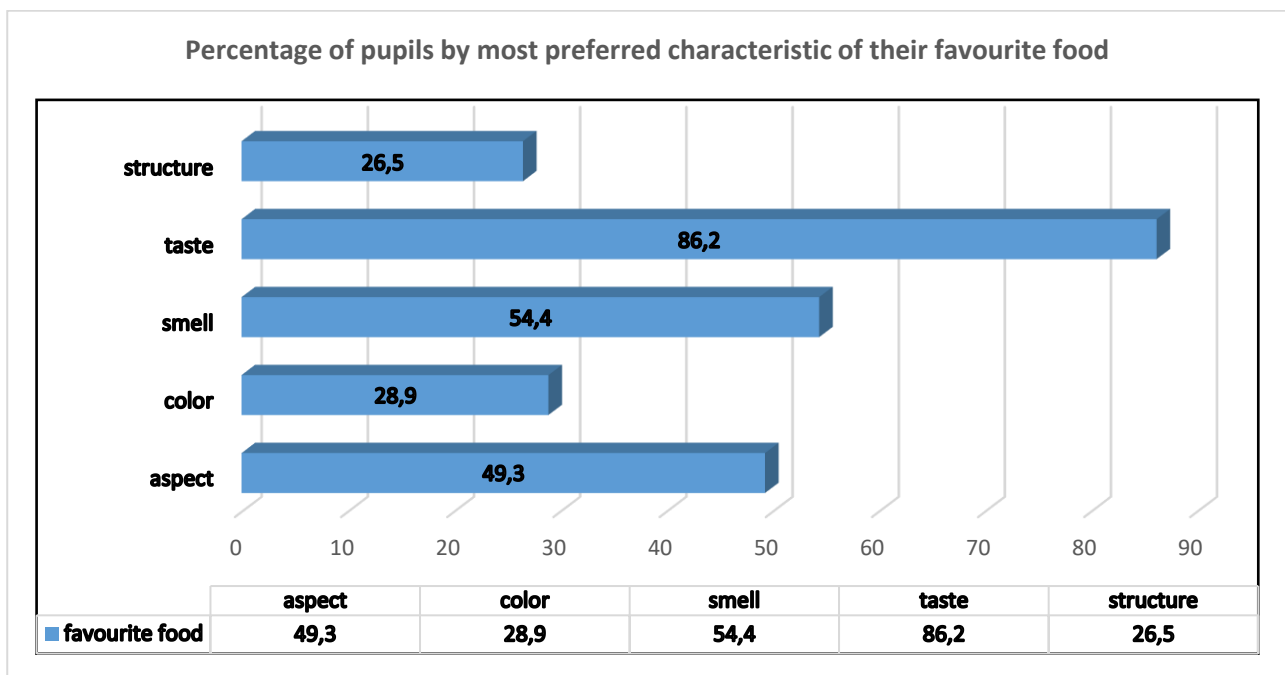


Picture n. 4_Percentage values of disliked food

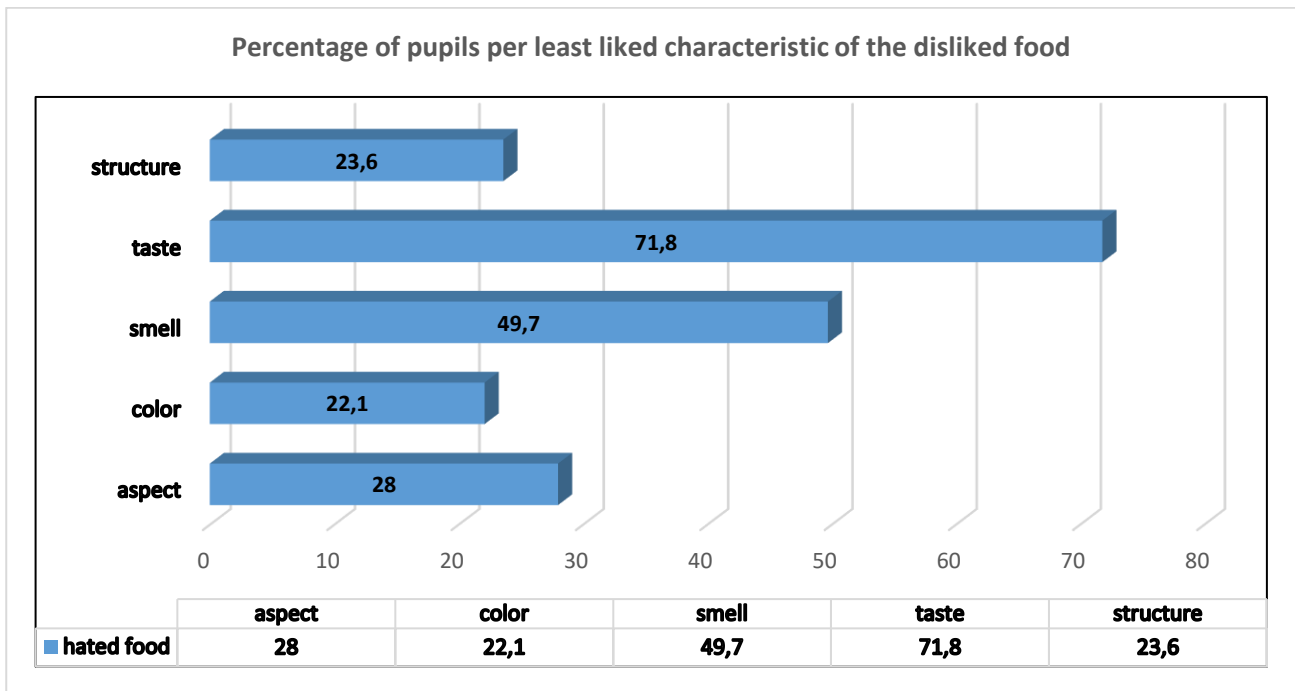
Finally, the analysis of the children's use of their five senses to describe and judge the foods they like and the foods they avoid also provides interesting inputs. In fact, in order to identify the role of the senses in the children's preferences, the questionnaire required them not only to indicate their favourite and hated foods but also to try to describe them using the five senses, referring to appearance and colour (sight), smell (sense of smell), taste (mouth) and texture (touch); moreover, the children also had to express a judgment of approval or disapproval of the above characteristics.

From the analysis of the collected information several interesting issues emerged, first of all the difficulty of the children to effectively and correctly use their senses in the various descriptions of food (e.g. many children made real sensory errors such as that the taste of lemon and orange is "bitter" or a tendency to express judgements instead of objective descriptions such as to describe the appearance they say "ugly" or taste "unpleasant").

Secondly, it emerged that the senses of "taste" and "smell" played a predominant role, since for both the preferred food and the disliked food, taste and smell were the aspects most taken into consideration. The preminent role of taste and smell is also confirmed by the children's description of the two types of food which, contrary to the other descriptive characteristics (appearance, colour and structure), revealed substantial differences between what the children liked and what they disliked.



Picture n. 5_Percentage values of preferred food by characteristics



Picture n. 6_Percentage values of disliked food by characteristics

4.3 Molise Region and the “School Fruit Programme”

Raising the awareness about the importance of the proper nutrition in the young age has been also the focus of the EU Programme “School Fruit”, promoted by the Italian Ministry of Agriculture, Food and Forestry. The Programme, promoted by the EU, aims to encourage the adoption of healthy and balanced eating habits through the free provision of fresh fruit and vegetables to children aged between 6 and 11 years.

In Molise, in 2013, 4.474 pupils from 40 schools have benefited from the results of the initiative, divided between the two regional provinces as follows: 3.111 pupils, for a total of 30 schools, in the province of Campobasso; 1.363 pupils, for a total of 10 schools, in the province of Isernia.

During the school year, each of these children received fresh fruit and vegetables, whole or cut and ready to use, specifically 33 single-serving packages for each student, designed with particular care to minimise environmental impact through the use of recyclable primary and secondary packaging. The width of the range of fruit and vegetable types offered, attention to seasonality and the certified quality of the products were guaranteed.

In the framework of this Programme all the students participated in the creative competition “The schools that...fruits”, creating pictures, story-tellings and compositions through which they described their approach to the world of fruit. These kind of initiatives were strongly promoted by Molise Region for promoting the knowledge and consumption of Italian fruit and vegetables among young people. The winner school, coming from the Municipality of Isernia, have collected the first prize, the €5.000 shopping voucher to spend on school equipment, and presented the work to the large audience.

Although very important, the mere distribution of fruit and vegetables does not automatically translate into regular and informed consumption. This is why the EU Programme have provided for so-called

"accompanying measures", i.e. a series of specific activities and tools that can increase the effectiveness of the message conveyed, as for example, the implementation of 27 schools gardens, 6 educational visits (at the D'Uva educational farm in Larino (CB) and at Tenuta Due in Castelpetroso), 2 theme days (i.e. animations including orange-pressing workshops, as well as play and educational tools for each of the pupils involved, have been organised in Molise).

4.4 Molise Region and the Communication Campaign “Molise, ANOTHER LAND”



Picture n. 7_Logo of “Molise, ANOTHER LAND” Communication Campaign

The concept "Molise UN'ALTRA TERRA" (Molise, ANOTHER LAND), conceived and realised in 2019, responds to the need to create a brand and a pay-off to be used for the entire communication campaign of the Molise Region's Department for Agricultural Policies, including the 2014/2020 RDP (Rural Development Programme). The pay-off declines the term "land" in several meanings and is associated with the adjective "other", to connote something different, exclusive:

- Another Earth, understood as soil, terrain: this underlines the reference to a quality land, lush, prosperous, rich in biodiversity; a different land because it is not threatened by pollution, by contamination.
- Another Land, understood as a territory: it draws a region that is still little explored and hides an invitation to discover its excellent food and wine, lifestyle, the traditions of its numerous municipalities, the variety of its landscape. The study of the logo and its graphic and chromatic elements stems from the objective of creating an iconic symbolism close to the world of agriculture, innovation, development and traditions. The logo is made up of 4 coloured circles (yellow: sun; green: agriculture; burgundy: viticulture; grey: technology and innovation) associated with the pay-off lettering. The circle represents perfection, completeness, union. The circle is symbolically linked to the perennial cycle of life and therefore to the biological cycle.

"Molise, ANOTHER LAND" has been conceived as an umbrella brand, under which other existing and more specific brands have been included (see "Molise, land of Tintilia - Molise, land of Truffles – MOLISE RDP 2014/2020). This is a strong, recognisable brand, able to express the identity of the territory, innovation, development and sustainability.

5. References

Banca D'Italia Eurosystema, *"Economie Regionali L'Economia del Molise Aggiornamento Congiunturale"*, 2020.

Cassetta Cosimo Carmine, *"Progetto di Educazione Alimentare"* Anno Scolastico 2012 – 2013, Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura nel Molise G.Sedati, 2013.

Cassetta Cosimo Carmine, Scardera Alfonso (a cura di), *"L'Agricoltura del Molise – Rapporto 2010"*, Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura nel Molise G.Sedati), Istituto Nazionale di Economia Agraria (INEA) 2011.

Cassetta Cosimo Carmine – Mottola Nicola, *"Indagine sulla redditività degli allevamenti apistici del Molise"*, ARSIAM, 2013

Cassetta Cosimo Carmine, PART II *"The Agro-Food Sector"* - Chapter III *"Typical Agricultural and Food Production of the Molise Region"*, pagg. 75-100, *"Molise-Montenegro Cross-border Cooperation"*, ARACNE editrice int.le S.r.l., 2015

Istituto Nazionale di Statistica (ISTAT), *"Le Imprese Agricole in Italia nel Registro ASIA"*. Anno 2018.

Panichella G., Morena A., *"6° Censimento Generale dell'Agricoltura (ISTAT), L'Agricoltura in Molise, Rapporto sui dati definitivi del 6° censimento generale dell'agricoltura in Molise"*, 2010.

"Slow Food", La Dispensa del Molise, 2004.

Stefanelli Antonella, *"Bambini e Alimenti: opportunità e rischi"*, Agenzia Regionale per lo Sviluppo e l'Innovazione dell'Agricoltura nel Molise G.Sedati), 2013.

6. WEB - References

<https://www.atlantecaseario.com/>

<https://www.politicheagricole.it/>

<https://psr.regione.molise.it/pianocomunicazione>

<https://www.quattroclici.it/denominazioni/tintilia-del-molise-doc/>

www.regione.molise.it



This project is co-financed by the European Union under the instrument for Pre-Accession Assistance (IPA II)

This document has been produced with the financial assistance of the Interreg IPA CBC Italy-Albania-Montenegro Programme. The contents of this document are the sole responsibility of Molise Region and can under no circumstances be regarded as reflecting the position of the European Union and of the Interreg IPA CBC Italy-Albania-Montenegro Programme Authorities.