

FRUIT PROCESSORS AND PRODUCERS IN CAUSENI LAB:
CERTIFICATION OF AGRICULTURAL PRODUCTS IN MOLDOVA

Causeni Agri-Hub: Community Cooling and Processing Fruits and Veggies Infrastructure

FRUIT PROCESSORS AND PRODUCERS IN CAUSENI LAB: CERTIFICATION OF AGRICULTURAL PRODUCTS IN MOLDOVA

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INTRODUCTION

was prepared as an educational material for manual farmers, public administration and social entrepreneurs, organizations under the project Causeni Agri-Hub: Community Cooling and Processing Fruits and Veggies Infrastructure, Co-Financed by Ministry of Foreign Affairs of the Republic of Poland and Polish Aid Program 2021. The project is implemented as a part of a partnership between the municipality of Tarczyn in Poland and the municipality of Causeni in Moldova.

The main purpose of the Manual is to provide the guidelines related to the EU and Moldovan regulatory system for foodstuffs, agricultural products, wines, alcoholic beverages, and wine-flavored beverages to boost Moldovan capacity building and its export potential. Geographical Indications and in-country Moldovan required certifications are the main categories of certification being described in the Manual with the comprehensive explanations and case studies. The Manual provides a thorough list of the national competent authorities and control bodies together with their contact information and links.

The main source of knowledgeable advice, expertise, assisting project management and its execution is Development Policy Organization. To make sure that readers can obtain information easily, the four manual sections made up the manual.

Manual I introduces the concept of Geographical Indication (GI), which is the product quality and reputation certification, widely used in the EU and an integral part of the product protection and product mark. The first section explains categories of products, which can be protected in the EU under the GI schemes, existing EU schemes with its explanation, differences, specifications and examples indicated. Additionally, the section elucidates the Estern Partnership with Moldova in terms of GI and gives a review on ongoing statistics in the EU database of registered GIs.

The second chapter of the Manual I describes the registration process of GI in the EU as well as the local registration requirements in Moldova with reference to the specific Laws. The purpose of the second section is to clarify the steps, procedures, required documents, costs, protection schemes and benefits of implementing GI certification of the product.

In Manual II the GI issue in Europe is further explored, but instead of focusing on the entire industry, specific EU cases are the main subject. The aim of the case studies is to illustrate how European countries have registered different GI, potential barriers and their solutions, how GI protection works in practice, and how to deal with the time- and cost-consuming registration processes. Case studies further demonstrate the advantages covered in the preceding chapter, including increased sales and boost in agrotourism, preservation of the past and traditions, and support for rural development.

Manual III highlights the certification requirements for agricultural products in Moldova. Starting with institutional and legal framework, range and scope of responsible institutions is presented, as well as the two main categories of certification. The section is mainly referring to the Laws of Moldova and certification bodies in Moldova procedures to give an explanation of how to acquire Certificate of Commodity, in which cases the certificate is mandatory or voluntary, what documents You have to prepare, where You can apply for the certificate and what the steps are of the application. The second section of certification described is ANSA certification of the harmlessness of products of animal and plant origin, which includes sanitary-veterinary certification and certification of the harmlessness of food products of vegetable origin. The essence of ISO 9001, ISO 22000 and Certificate-ECO is explained in the last part of the chapter.

Manual IV is a section about Moldova's biodiversity of agricultural crops, demonstrating the broad varieties of crops registered in catalogs of PNIISH, ISPHTA, EU Frumatis Catalog, GBNI and many others. The chapter explains the export potential and crops worth considering for cultivation. The last part of the Manual IV presents the data from the National Bureau of Statistics of the Republic of Moldova – Exports of the Republic of Moldova in European Union countries (in thousands USD) in 2017–2021 with further explanation of export tendencies in numbers and years.



MANUAL I: MOLDOVA AND EU: PROTECTION OF GEOGRAPHICAL INDICATIONS

1. THE ESSENCE OF GEOGRAPHICAL INDICATIONS (GIS)

Indications of geographical origin (IGOs), one of the earliest types of trademark, were used by traders to exploit local reputation through the use of distinctive signs evoking a particular geographical origin. The labels given to the products underline their reputation, certain quality e.g. product's nutritional properties, flavor, appearance, the process and raw materials used to produce it, or other characteristics resulting from their geographical origin.

There are 2 major perspectives on the Geographic Indications: the European and the American: sui generis/unique in the EU, where the products granted with GIs are intrinsically connected to terroir or a distinct place of origin/location, production, processing or all together, depending on GIs, being collective rights, open in formula and less costly to protect, versus the US trademark approach.

¹ http://ipbio.org/pdfs/papers/a.pdf

In the US, in principle (wine and spirits are regulated differently), a product can carry a geographical name, but the geographical name – even though it may be associated with the toponym – does not in itself guarantee specific characteristics and does not mean that it was made of a raw material originating from the GI area or produced or/and processed at the refereed GI location. However, the 2 models can "co-exist" upon a certain compromise (like one reached under the Canada-EU CETA), though turbulently (see more on the GIs focused controversies around the negotiated Transatlantic Free Trade Area or TAFTA). GIs relation to trademarks is outlined in detail in the respective MD DCFTA.

The following categories of products can be protected in the EU as Geographical Indication products:

- Wines under EC Regulation n° 1234/20071, which incorporates EC Regulation 479/20082
- Spirits under EC Regulation nº 110/20083
- Agricultural and foodstuff products under EC Regulation 510/20064.2

As per the EU quality schemes, Geographical indications establish intellectual property rights for specific products, whose qualities are specifically linked to the area of production.

Geographical indications comprise:

- PDO protected designation of origin (food and wine)
- PGI protected geographical indication (food and wine)
- GI geographical indication (spirit drinks).3







² https://ipkey.eu/sites/default/files/legacy-ipkey-docs/qa-manual-european-legislation-on-gis-en.pdf

³https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/geographical-indications-and-quality-schemes-explained_en

1.1 PROTECTED DESIGNATION OF ORIGIN (PDO)

The product names registered as PDOs are those that have the strongest connection to the place where they are produced.

Products: Food, agricultural products and wines.

Specifications: Every part of the production, processing and preparation process must take place in the area concerned. For wines, this means that the grapes must come exclusively from the geographical area where the wine is produced.

Examples: Salamini Italiani alla Cacciatora, Prosciutto di Parma, Prosciutto Toscano, Patata di Bologna, Parmigiano Reggiano, Asiago, Gorgonzola, Grana Padano, Pecorino Toscano, Piave, Montasio, Pistacchio verde di Bronte, Arancia di Ribera, Aceto Balsamico Tradizionale di Modena, Kalamata oil. 4

Label: mandatory for food and agricultural products, optional for wine.



PDO example: Pecorino Toscano

Source: https://www.google.com/search? q=Pecorino+Toscano&sxsrf=ALiCzsZ9hUGRzW uGfx3c3vjaKRHQziyTA:1668089607504&source =Inms&tbm=isch&sa=X&ved=2ahUKEwjUyYiE5 qP7AhVvmIsKHeZ8DPAQ_AUoAXoECAIQAw&bi w=1512&bih=719&dpr=2#imgrc=sKVrxhnkG4_YCM

⁴ https://www.enjoytheauthenticjoy.com/pdo-pgi/

1.2 PROTECTED GEOGRAPHICAL INDICATION (PGI)

The PGI highlights the link between the specific geographical area and the name of the product when a certain quality, reputation or other characteristic is essentially attributable to its geographical origin.

Products: Food, agricultural products and wines.

Specifications: For most products, at least one of the production, processing or preparation stages takes place in the region. In the case of wine, this means that at least 85% of the grapes used must come exclusively from the geographical area where the wine is actually produced.

Example: Westfälischer Knochenschinken, Marmelada Branca de Odivelas, Mortadella Bologna, Zampone Modena, Cotechino Modena, Agnello di Sardegna, Bresaola della Valtellina, Speck Alto Adige, Arancia Rossa di Sicilia, Mela Rossa Cuneo, Ciliegia di Vignola, Cipolla Rossa di Tropea, Limone di Siracusa, Nocciola del Piemonte, Pasta di Gragnano, Aceto Balsamico di Modena.5

Label: mandatory for food and agricultural products, optional for wines.



PGI example: Marmelada Branca de Odivelas, Portugal

Source:https://projetos.7maravilhas.pt/? s=MARMELADA+BRANCA+DE+ODIVELA

5 https://www.enjoytheauthenticjoy.com/pdo-pgi/

1.3 GEOGRAPHICAL INDICATION OF SPIRIT DRINKS (GI)

The GI protects the name of a spirit drink originating in a country, region or locality if the special quality, reputation or other characteristics of the product are essentially attributable to its geographical origin.

Products: Spirits.

Specifications: For most products, at least one of the distillation or preparation stages takes place in the region. However, the raw products do not have to originate in the region.

Example: Irish Whiskey GI has been brewed, distilled and aged in Ireland since the 6th century, but the raw materials do not originate exclusively in Ireland.

Label: optional for all products.



Spirit drinks example: Irish Whiskey

Source: https://www.worldipreview.com/news/eu-grants-irish-whiskey-gi-17771

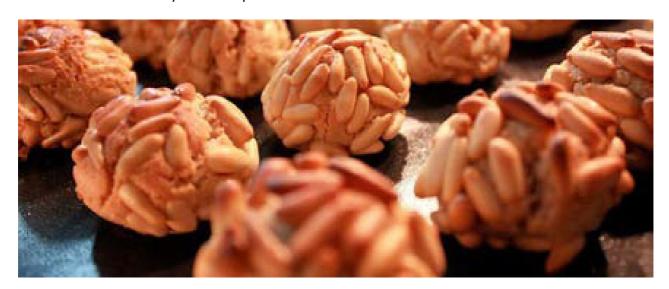
1.4 TRADITIONAL SPECIALITY GUARANTEED (TSG)

The term Traditional speciality guaranteed (TSG) highlights traditional aspects, such as the method of production or the composition of the product, without being tied to a specific geographic area. The product is considered "traditional" if it has been sold on the EU market in an unchanged form for at least 30 years. TSG recognition can only be applied for food and agricultural products, not wines, and requires that the product has characteristic features that clearly distinguish it from other food and agricultural products in the same category. For example, certain cheeses or specialties prepared in a traditional manner could qualify.

Products: food and agricultural products.

Example: Mozzarella (cheese), Gueuze TSG (traditional beer), Panellets (traditional dessert).

Label: mandatory for all products.6



TSG example: Panellets, Spain

Source: https://www.barrigasana.com/keto-panellets-de-silvia/

⁶ https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/geographical-indications-and-quality-schemes-explained_en#:~:text=As%20part%20of%20the%20EU's,protection%20agreement%20has%20been%20signed.

1.5 OTHER SCHEMES: MOUNTAIN PRODUCT

The quality term "mountain product" emphasizes the special features of a product that is produced in mountain areas under difficult natural conditions. Recognising this is beneficial to both farmers and consumers. It allows farmers to better market the product and ensures that certain characteristics are clearly recognisable to consumers.

Products: Agricultural and food products.

Specifications: Raw materials and feed come from mountain areas. Processed products should also be produced in such areas.





"Mountain product": Alpine cheese

Source: https://lafromagerieonly.wordpress.com/2014/10/18/alpine-cheeses/

⁷ https://www.europarl.europa.eu/factsheets/en/sheet/100/outermost-regions-ors-#:~:text=The%20European%20Union%20supports%20the,the%20Canary%20Islands%20(Spain).

1.6 OTHER SCHEMES: PRODUCT OF EU'S OUTERMOST REGIONS

The Canary Islands, Guadeloupe, French Guiana, Réunion, Martinique, Mayotte, and Saint Martin (all in France), the Azores and Madeira (both in Portugal), and Réunion, Martinique, and Mayotte (all in France) are among the EU's outermost areas, which are supported in their development. 7

Due to isolation and isolation's associated severe topographical and meteorological conditions, agriculture in the EU's most remote regions faces challenges. A special logo has been designed to promote agricultural products from the EU's most remote areas.8



Logo: Product of EU's outermost regions

Source:

https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/geographical-indications-and-quality-schemes-explained_en

⁸ https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/geographical-indications-and-quality-schemes-explained_en

1.7 EASTERN PARTNERSHIP: MOLDOVA

The issue of EU GIs is closely tied to the EU common agricultural policy and its current transformation - the reinforcement of the rural development pillar (socalled 2nd pillar), under the CAP (Common Agricultural Policy) reform effort: as such considered to be a way to boost added value of rural production & stimulate rural employment creation.

By the same token the EU GIs scheme promotion ranks high amongst the EU development aid & technical assistance priorities within the EaP area, including Moldova.9 Detailed regulations about protection of geographical instructions, names of places of origin and the guaranteed traditional products in Moldova are stated in the law of Moldova No. 66XVI of 27.03.2008 with later amendments.10

On June 26, 2012, in Brussels, Belgium, the Republic of Moldova and the European Union (EU) signed an agreement on the mutual protection of geographical indications (GIs) for agricultural products and foodstuffs. Agreement between the Government of the Republic of Moldova and the European Union on the Protection of Geographical Indications for Agricultural Products and Foodstuffs contributes to recognition of Moldovan products with GI on the European market and promotion of exports of such products, which have greater marketing potential compared with the ordinary ones.11

⁹ http://fpr.org.pl/storage/2018/05/What-you-should-know-about-EU-Protected-Food-Schemes.pdf

¹⁰ https://cis-legislation.com/document.fwx?rgn=24075 11https://agepi.gov.md/en/news/republic-moldova-and-european-union-have-signed-agreement-protection-geographical-indications

1.8 STATISTICS OF THE GI, PGI, PDO AND TSG REGISTRATION IN THE EU: EAMROSIA

The data used for the below graphics was taken via eAmbrosia the EU geographical indications register website: an official website of the European Union (11.2022).

The absolute leaders as per the GI, PGI, PDO and TSG registration are Italy and France with 923 and 793 registration respectively. Spain, Greece, Portugal, Germany, China, Hungary, United Kingdom, Romania are also among the top 10 countries with the registered food, wines and spirit drinks in the EU in the GI, PGI, PDO and TSG categories.

Diagram 1 presents the dispersion of countries around the world with registered GI, PGI, PDO and TSG in the EU. The total number of registered GI is 274, with 16 indicators from non-EU countries. 2024 PDO and 1532 PGI were registered around the world. The number of TSG is drastically lower with 77 TSG (70 EU countries and 7 non-EU countries).

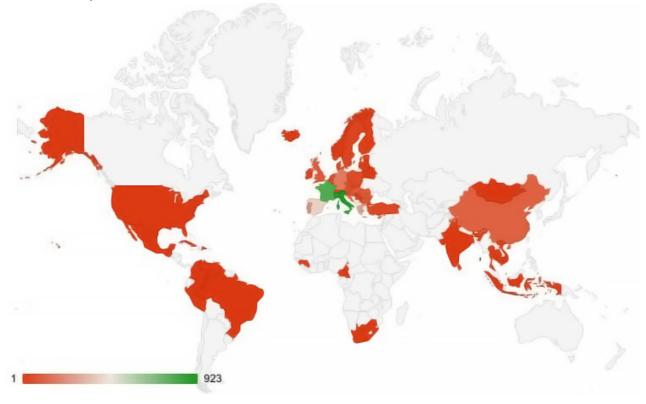


Diagram 1: Countries with registered in the EU database GI, PGI, PDO and TSG

2. GIS REGISTRATION IN THE EU

2.1 REGISTRATION PROCESS: MOLDOVA FOCUS

The main involved parties in the procedure are the applicants (producer groups) and the national and European authorities responsible for registration. The producer group wishing to apply for registration of a European name GI in the EU must go through a procedure that includes two phases, one at national level and one at European level. The whole procedure can take several years.

A two-stage procedure of the registration of GI foodstuff, wine or spirits in the EU:

1. At first you need to apply & effectively be granted the GI status for the product in your home country, in accordance with the national, in-country regulations and procedures on the GIs. These includes non-EU countries like Moldova, having their respective GI-focused legal frameworks deemed broadly and provisionally (temporarily: providing a huge approximation homework to be done) compliant with the EU regulations in the field. The national procedure is explained in possible detail under part one of this title.

The bilateral agreements to which the Republic of Moldova is party represents another means of international protection of appellations of origin (AO) and geographical indications (GIs). In this respect, it could be mentioned the Agreement between the European Union and the Republic of Moldova on the protection of geographical indications of agricultural products and foodstuffs (signature date 26/06/2012, date of entry into force 01/04/2013).

At first check if the product is not registered yet: consult the list of the products granted with GIs at:

http://www.db.agepi.md/GeogrIndications/ResultsGI.aspx.

Additionally, at the EU official data base eAmbrosia, which is a legal register of names of agricultural products and foodstuffs, wine and spirits registered and protected throughout the EU at:

PGI, PDO and GI: https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/

TSG at: https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/tsg

It provides direct access to information on all registered geographical indications, including legal protection instruments and product specifications. It also contains important data and links to applications and publications prior to registration of the geographical indications.

If it was registered: you may always join the producers group: GIs are open in its formula.

In order to benefit under the above mentioned agreement, an appellation of origin / geographical indication should be registered nationally under Law no. 66-XVI / 2008 (available at https://www.legis.md/cautare/getResults?doc_id=93469&lang=ro) on the protection of geographical indications, appellations of origin and traditional specialties guaranteed and submitted subsequently for protection on the territory of the EU (important fact - without paying any fees).

In Moldova the association submits to the Ministry of Agriculture and Food Industry an application. The regulations regarding the approval procedure of the specifications for agri-food products with designations of origin, geographical indications and traditional specialties guaranteed are available at

https://www.legis.md/cautare/getResults?doc_id=88635&lang=ro.

The document also describes the required documentation for the submission of GI, which are:

- 1) association registration certificate;
- 2) the statute of the association;
- 3) the extract from the minutes of the general meeting, where the specifications were adopted;
- 4) three copies of the specification signed by the president of the association with the application of the stamp;
- 5) the name and address of producers, members of the association of producers in the delimited geographical area;
- 6) the declaration of conformity by which the issuer ensures that the agro-food product with PDO, PGI and STGP complies with the applicable essential requirements, according to annex no. 3 to this Regulation;
- 7) a single document that will contain the main elements of the specifications: the name, the description of the product, including, as the case may be, the specific rules applicable to packaging and labeling, as well as a brief delimitation of the geographical area, the description of the link of the product with the geographical environment or with the origin geographical, as appropriate, including, if necessary, the specific elements of the product description or production method justifying the link

Regulation of the Ministry of Agriculture and Food Industry governing the approval procedure for food products specifications with Geographical Indications, Appellations of Origin and Traditional Specialties Guaranteed of 2015.

Currently, under the Agreement between the European Union and the Republic of Moldova, 3494 appellations of origin (AO) and geographical indications (GIs) originating in the European Union (http://www.db.agepi.md/GeogrIndications/SearchGI.aspx) are protected in the territory of the Republic of Moldova and 2 appellations of origin (Ciumai and Romănești) and 4 geographical indications (CODRU, ŞTEFAN VODĂ, VALUL LUI TRAIAN, DIVIN) originating in Moldova were submitted for protection in the territory of the European Union.

2. Once your product gets the national GIs recognition, obtaining the incountry GI protection you may apply for the EU GI status.

The very precise guide on GI registration and amendments EU can be found at the official website of the European Union https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/registration-name-gi-product/applications-register-new-gi-products_en#agricultural-products

Key regulations in brief:

In the EU & to be approximated in MD in line with the AAs:

- Council Regulation (EC) No 510/2006 of 20 March 2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs.
- Commission Regulation (EC) No 1898/2006 of 14 December 2006 laying down detailed rules of implementation of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs
- Regulation (EC) No 110/2008 of the European Parliament and of the Council of 15 January 2008 on the definition, description, presentation, labeling and the protection of geographical indications of spirit drinks

- Council Regulation (EC) No 1234/2007 of 22 October 2007 establishing a common organization of agricultural markets and on specific provisions for certain agricultural products (Single CMO Regulation), the part related to wine geographical indication in Chapter I of Title II of Part II
- Commission Regulation (EC) No 555/2008 of 27 June 2008 laying down detailed rules for implementing Council Regulation (EC) No 479/2008, as regard support programmes, trade with third countries, production potential and on controls in the wine sector, namely, Title V 'Controls in the wine sector'
- Council Regulation (EC) No 509/2006 of 20 March 2006 on agricultural products and foodstuffs as traditional specialities guaranteed
- Commission Regulation (EC) No 1216/2007 of 18 October 2007 laying down detailed rules for the implementation of Council Regulation (EC) No 509/2006 on agricultural products and foodstuffs as traditional specialities guaranteed. 12

To register the name of a product, EU producers or producer groups must define the specifications of the product and, if applicable, the link with the geographical area. The application is submitted to national authorities for consideration and then forwarded to the European Commission, which reviews the application.

For non-EU product registration, producers submit their applications to the European Commission directly or through their national authorities.13

¹² http://fpr.org.pl/storage/2018/05/What-you-should-know-about-EU-Protected-Food-Schemes.pdf

https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/registration-name-gi-product_en

2.2 REQUIRED DOCUMENTATION: EU

Broadly confusing (unclear and unevenly scattered across secondary and supplementary legislation), appeal with the EU regulations listing the following documents to be submitted: the application or the GI application, the product specification, including the exact delineation of the GI area, approved by the competent authority, and the single document: summary of main points of the specification – the name the registration of which is requested (crucial), the description of the product, where appropriate, specific rules concerning packaging and labeling, finally a concise definition of the geographical area, additionally an explanatory note on the intrinsic link between the product the GI & a short justification for this.

The form for the single document for registration of an agricultural product as a protected designation of origin (PDO) and protected geographical indication (PGI), as well as the form for the product specification for a traditional specialty guaranteed (TSG), are available in Annexes to Regulation (EU) 668/2014 at https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014R0668.

The forms for the single document to register a wine product as a protected designation of origin (PDO) or protected geographical indication (GI) are available in the Annex to Regulation (EU) 2019/34 https://eur-lex.europa.eu/legal-content/EN/TXT/? uri=CFLFX:32014R0668.

The form for the single document to register a spirit drink as a geographical indication (GI) is available in the Annex to Regulation (EU) 2021/1236 at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1236 14

23

https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/registration-name-gi-product_en

Meanwhile, the list of mandatory attachments includes:

- Status of the group or applicant approved by the competent authority (submitted for official approval together with the product specification: no separate approval procedure is required);
- Documents (including historical chronicles, testimonials / documents, materials, studies, analyses, relevant literature, surveys, e.g., estimated reputation), depending on the category GI; (for AO, PGI), linking the qualities and specificities of the product to the GI area, which is all-inclusive;
- Documents that confirm and prove the specific and traditional character of the product;
- Copy of the decision of the competent authority approving the product specification (the authorities listed under the section "Control" and in the Annex);
- Confirmation from local authorities (somewhat unusual) that the applicant produces the products specified in the application within the defined area GI (only for AO, PGI);
- Names and addresses of the authorities or bodies that control compliance with the provisions of the specification (in the framework of the control & in the annexes).

The Commission shall verify that the application contains the required information and that it is free of errors. The Commission's examination of the application should not exceed a period of 6 months from the date of receipt of the application from the EU country.

2.2.1 PRODUCT SPECIFICATION

Specifications are essential for the protection of goods or services with geographical indications. Each country is free to establish the basic criteria for creating a product specification according to its traditions and the needs of producers. However, an essential element of the credibility of GI is information that demonstrates the link between the characteristics of the product and its geographical environment, as well as a description of the production process.

In the European Union (EU) a product specification for a wine products should contain the following elements:

- 1. The single document referred to in point (d) of Article 94(1) of Regulation (EU) No 1308/2013 shall include the following main elements of the product specification:
- (a) the name to be protected as a designation of origin or a geographical indication;
- (b) the Member State or third country to which the demarcated area belongs;
- (c) the type of geographical indication;
- (d) a description of the wine or wines;
- (e) the categories of grapevine products;
- (f) the maximum yields per hectare;
- (g) the indication of the wine grape variety or varieties from which the wine or wines are obtained;
- (h) a concise definition of the demarcated geographical area;
- (i) a description of the link referred to in point (a) (i) or in point (b)
- (i) of Article 93(1) of Regulation (EU) No 1308/2013;
- (j) where applicable, the specific oenological practices used to make the wine or wines, as well as the relevant restrictions on making them;
- (k) where applicable, the specific rules concerning packaging and labelling and all other essential relevant requirements.

- 2. The description of the link referred to in point (i) of paragraph 1 shall include:
- (a) in the case of a designation of origin, a description of the causal link between the quality and characteristics of the product and the geographical environment with its inherent natural and human factors to which they are essentially or exclusively linked, including, where applicable, elements of the product description or production method justifying the link;
- (b) in the case of a geographical indication, a description of the causal link between the geographical origin and the relevant specific quality, reputation or other characteristics attributable to the geographical origin of the product, accompanied by a statement indicating on which ones of the given factors specific quality, reputation or other characteristics attributable to the geographical origin of the product the causal link is based. The description may also concern the elements of the product description or production method justifying the causal link.

Where an application covers different categories of grapevine products, the details bearing out the link shall be demonstrated for each of the grapevine products concerned.

3. The single document shall be drawn up in accordance with the form made available in the information systems referred to in Article 30(1)(a). Third countries shall use the model for single documents set out in Annex I.15

In the European Union (EU) a product specification for a spirit products should contain the following elements:

- (a) Name(s) to be registered
- (b) Third country or countries to which the geographical area belongs

¹⁵ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019R0034

- (c) Geographical Indication type
- (d) Category or categories of the spirit drink
- (e) Description of the characteristics of the spirit drink
- (f) Definition of the geographical area
- (g) Production method
- (h) Specific rules concerning packaging
- (i) Specific rules concerning labelling
- (j) Description of the link between the spirit drink and its geographical origin, including, where appropriate, the specific elements of the product description or production method justifying the link

In the European Union (EU) a product specification for agricultural products and foodstuffs should contain the following elements:

- (a) Name(s) [of PDO or PGI]
- (b) Member State or Third Country
- (c) Description of the agricultural product or foodstuff
 - Type of product [listed in Annex XI]
- Description of the product to which the name in (1) applies
- Feed (for products of animal origin only) and raw materials (for processed products only)
- Specific steps in production that must take place in the identified geographical area
- Specific rules concerning slicing, grating, packaging, etc. of the product the registered name refers to
- Specific rules concerning labelling of the product the registered name refers to
- (d) Concise definition of the geographical area
- (e) Link with the geographical area

2.3 WHO MAY APPLY FOR GI PROTECTION?

In principle, producer organizations (and/or processors of agricultural products or foodstuffs) are responsible for defining the content of the product specifications GI and for the day-to-day management of the GI.

Their tasks include the management and monitoring of production regulations (INTERNAL CONTROL), the definition of quality control plans for the final product, the control of the implementation of legal and regulatory requirements at all levels (farms, producers and distributors) on production methods and packaging requirements. Such organizations – also known as producer groups – often carry out many activities that small producers could not do on their own, such as marketing and legal actions to promote and protect the name GI, coordinating sales, fundraising through grants and programs such as ENPARD.

For the practical role of the producers group see the examples and insights provided throughout this guide. Still, what is worrisome is that the conducive legal framework for such groupings, associations or cooperatives is missing in Moldova. Existing groups face legal obstacles and bureaucratic hurdles in terms of time-consuming recordkeeping and taxation.

2.4 COSTS ASSOCIATED WITH THE GI REGISTRATION AND GI OPERATION

There is no denying the fact that there are costs related to establishing a GI. It is difficult to determine these costs precisely, as they depend largely on the specifics of each GI, however the following general cost categories can be identified:

- Costs associated with establishing a producer organization;
- Costs associated with establishing a workable traceability system, usually included in the product specification: origin of input, correlation between input and output, registration, etc;
- Costs for preparing the product specification and other documents to justify and support the application GI and for any technical analysis to define the boundaries of the area GI, e.g., at MD at least 100 EURO for consultation with an expert to delineate GI; other costs if you wish to hire a professional lawyer to prepare the documents and handle your case;
- Registration and procedural fees payable to the competent authority in the country;

- · Costs of processing appeals, if any;
- Costs related to inspections to be carried out in the case of GI, which are not very high;
- The basic fee for the submission and examination of the GI application is: 240 EURO, in addition, when the registration certificate is issued, a fee of 300 EURO is charged.16

3. GI PRODUCTS PROTECTION IN THE EU

As part of the EU's system of IPRs, names of products registered as GIs are legally protected against imitation and misuse within the EU and in non-EU countries where a specific protection agreement has been signed.17

Agricultural products and foodstuff protection is regulated by the Regulation 510/2006, Regulation 1234/2007 for wines and Regulation 110/2008 for spirits.

As per EC Regulations on GIs, Regulation 510/2006 relating to agricultural products and foodstuffs registered names shall be protected against:

- (a) any direct or indirect commercial use of a registered name in respect of products not covered by the registration in so far as those products are comparable to the products registered under that name or in so far as using the name exploits the reputation of the protected name;
- (b) any misuse, imitation or evocation, even if the true origin of the product is indicated or if the protected name is translated or accompanied by an expression such as 'style', 'type', 'method', 'as produced in', 'imitation' or similar;

¹⁶ http://fpr.org.pl/storage/2018/05/What-you-should-know-about-EU-Protected-Food-Schemes.pdf

¹⁷ https://agriculture.ec.europa.eu/farming/geographical-indications-and-quality-schemes/registration-name-gi-product/applications-register-new-gi-products_en#agricultural-products

- (c) any other false or misleading indication as to the provenance, origin, nature or essential qualities of the product, on the inner or outer packaging, advertising material or qualities of the product, on the inner or outer packaging, advertising material or documents relating to the product concerned, and the packing of the product in a container liable to convey a false impression as to its origin;
- (d) any other practice liable to mislead the consumer as to the true origin of the product.

Where a registered name contains within it the name of an agricultural product or foodstuff which is considered generic, the use of that generic name on the appropriate agricultural product or foodstuff shall not be considered to be contrary to points (a) or (b) in the first subparagraph.18

GIs also stop unauthorized uses of goods denominated in GIs. GIs offer defense against acts of misappropriation and unfair competition as IP rights. Producers have the sole right to use the GI and to forbid its use by third parties whose goods don't come from the same region or don't meet the approved production requirements.19

18

https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32006R0510

¹⁹ https://www.wipo.int/ip-outreach/en/ipday/2022/toptips/geo_indications.html

4. BENEFITS OF THE GI APPROACH

As per the EU statement: "Agri-food and drink products whose names are protected by the European Union as "Geographical Indications" (GIs) represent a sales value of €74.76 billion, according to a study published today by the European Commission. Over one fifth of this amount results from exports outside the European Union. The study found that the sales value of a product with a protected name is on average double that for similar products without a certification." 20

4.1 BENEFITS FOR THE PRODUCERS

The extensive protection of the names rights represented in the previous chapter is an obvious benefit for the producers. Furthermore, knowing that their GI product manufacturing will always be rooted in the specified area is one of the major advantages for manufacturers who can use the GI protection. A GI right holder cannot stop a third party from producing the same goods using the same processes and, most likely, the same raw materials as those specified in the GI's specifications. For instance, anyone can import the Champagnemaking components from France and develop a product that is a perfect replica of Champagne in every material aspect, including flavor, appearance, and color, by following the precise procedures employed by the genuine Champagne producers. However, GIs safeguard the specific geographic location of manufacturing.

Cultural preservation: whether natural or manufactured, GI-tagged products are anchored in the local heritage. The tag also helps to conserve traditional production techniques, which in turn serves to save the region's culture and heritage. Following the awarding of the tag, several crafts that had been dying from a lack of patronage have been revitalized thanks to the awareness and attention generated as a result.

https://ec.europa.eu/commission/presscorner/detail/en/IP_20_683

20

Branding and proof of quality permit producers to put higher prices and create an added value of the production chain. Consumers perceive the product as one-of-a-kind and eager to personally experience the centuries of practice process of manufacturing the goods, which stimulates the creation of culinary routes, tours or even museums.

Exports of geographical indications: Of the overall agri-food exports from the EU, geographical indications account for 15.5%. The top three international markets for EU GI products are the U.S., China, and Singapore, which account for half of the export value of GI products.



Champagne is the queen of sparkling wines and one of the most well-known wines in the world, making Champagne country the ideal location for French wine tours. Tour in Champagne France is an excellent example of the GI tours, perfect for holidays, where visitors can taste the wine, learn about all of the rules that determine whether wine may be designated as Champagne, including the provenance of the grapes and the method of fermentation utilized.

Source:https://www.lunion.fr/id355976/article/2022-03-30/le-guide-de-loenotourisme-en-champagne

4.2 BENEFITS FOR THE CONSUMERS

In a global marketplace, customers are increasingly seeking out distinctive, high-quality goods. Consumers can take advantage of more variety and choice thanks to GIs. Additionally, GIs help prevent the standardization of food items by maintaining traditional production methods.

GIs provide consumers with assurances regarding the product's origin, its features (such as ingredients), and conventional production techniques, the product's quality: assurance that the food was prepared in accordance with the particular specifications because of the official controls that were implemented and the actual nature of the product: only goods that adhere to the requirements can use the name.

The geographical indication aids consumers in differentiating between high-end and low-end goods. Customers may be willing to pay more for goods from that location if they trust the geographical indication.21

4.3 BENEFITS FOR RURAL AREAS DEVELOPMENT

In comparison to other methods of protecting intellectual property rights such as patents and trademarks, which require innovative knowledge and industrially applicable technology, geographical indications are generally based on traditional knowledge generated and passed down through generations. This knowledge can become a powerful tool for marketing strategies and, therefore, for promoting the developing regions. The link between product and region allows the marketing of niches, the development of brands and the creation of value from recognised indications.

21 https://edepot.wur.nl/171656

Geographical indications can serve as a tool to bind consumers by establishing a link between product characteristics and geographical origin. Increased demand in product results in the enlarged supply and GI production.22 The regional identity can be strengthened by the GI product identity, which then becomes available for other local manufacturers' products. Because of the relationship with the original product, manufacturers of other goods and services in the area can now advertise their local goods thanks to the availability of the intellectual property rights. Consumers see GIs as desirable goods that they are willing to pay more for than typical foods, and GIs typically fetch higher retail prices.23

Geographic Indication awareness and trends in the population contribute enormously to the tourism and gastro/agri/rural tours. Because of the detrimental consequences of mass tourism on the environment, tourist practices that respect nature and cultural values and emphasize conservation are becoming more and more important. Implementations of culinary tourism, agrotourism, and rural tourism have grown in significance in this environment.24 For instance, the protected geographical indication Stefan Voda, which is located in the southeast of Moldova and is best known for producing red wine is a place of destination for a 2-days tour, where tourists can visit 5 wineries and discover the most popular IGP Stefan Voda wines. Not only was Stefan Voda registered as GI in Moldova, but also in the United Kingdom according to the UK scheme.25 It was not, however, registered in the EU.

The important aspect or even prerequisite of gastro tours are paved roads and defined touristic routes, which boost the **infrastructure development** of the rural areas.26

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²² https://www.origin-gi.com/wp-content/uploads/2011/12/manual_acpcomplet.pdf

²³https://www.research.unipd.it/bitstream/11577/3281410/2/sustainability-published.pdf

²⁴http://acikerisim.gelisim.edu.tr/xmlui/bitstream/handle/11363/1018/10.22573.spg_.ijals_.016.s12 200069.pdf?sequence=1&isAllowed=y

²⁵ https://www.gov.uk/protected-food-drink-names/stefan-voda

²⁶ https://www.origin-gi.com/wp-content/uploads/2011/12/manual_acpcomplet.pdf

Successful GIs development typically attracts greater investment to the region, slows rural exodus, and prevents rural areas from becoming desertified. GIs have the ability to have a positive impact on a nation's entire economy by boosting GI sales and incomes, creating jobs in other industries and parallel activities like tourism, halting the outflow of rural residents, maintaining traditional knowledge, and preserving biodiversity. For developing nations, these challenges have strategic importance.



The best wineries to visit in Stefan-Voda: Purcari Winery

Source: https://winetravelawards.com/nominee/vinaria-purcari/



MANUAL II: BEST EU PRACTICES IN GI REGISTRATION CASE STUDY

The GI issue in Europe is further examined in this chapter, although this time, particular EU cases are the focus rather than the entire industry. In the case studies we will elaborate on the experience of the European countries in registering various GI, possible obstacles and solutions, how the GI protection looks like in practice, how to combat time and cost-consuming process of registration. Case studies will additionally illustrate the benefits discussed in the previous chapter, which are boost in sales and agrotourism, protection of the origin and traditions, and contribution to rural development.

1. ČESKÉ PIVO: ORGANIZE CONSORTIUM TO AVOID THE TIME-CONSUMING PROCESS

Different GI registration consortia formation and cost burden sharing models are being tested throughout Europe. In the case of České pivo (Czech beer), the competing industry players band together to protect product quality, ensure that standards are upheld, and eliminate dubious imported products from the domestic market. České pivo (Czech beer), a Protected Geographical Indication (PGI), was requested by the Czech Brewers and Maltsters Association in 2008 and approved by the European Commission.



České pivo

Source: https://www.tasteatlas.com/ceske-pivo

This indication assures the customer that only Czech ingredients and conventional methods have been used while brewing beer on Czech Republic territory through the Czech Agriculture and Food Inspection Authority (referred to as the control body under the product specification). 27

Only those beers that are produced using the procedure outlined in the application and meet the criteria specified in the application are given the PGI České pivo designation, not all beers brewed on Czech Republic territory.28

The Brevnov Monastery, where the monks brewed beer beginning in 993 AD, is credited with producing the first high-quality beer in the nation. The utilization of premium ingredients during the brewing process, traditional brewing techniques, and regional expertise passed down from generation to generation all set the brews apart29

²⁷ http://fpr.org.pl/storage/2018/05/What-you-should-know-about-EU-Protected-Food-Schemes.pdf

²⁸ https://www.agriculturejournals.cz/publicFiles/455_2013-CJFS.pdf

²⁹ https://www.tasteatlas.com/ceske-pivo

The predominant flavors of the beer are malt and hops; just a slight amount of pasteurization, yeast, or ester is permitted; and no extraneous flavors or odors are allowed. České pivo's overall scent is less intense because there are very few unfavorable fermentation byproducts present. The bitterness of České pivo is one of its key qualities. 30

In 2017, GIs revenues totaled 937 million euros in Czech Republic. As per the sales, the main category of GIs were PGI agricultural and food products, where 92% was the share of beers: České pivo and Českobudějovické pivo. Between 2010 and 2017, the Czech GI sales value increased by a total of 17%.31

The protection of Czech beer as a national GI does not prevent Czech brewers from registering their brews as independent EU GIs. In addition to the generic national GIs, a dozen Czech beers are registered with the EU and labeled with the distinctive PGI: Černá Hora, Březnický leżak, Brněnské pivo, Starobrněnské pivo, Znojemské pivo, České pivo – protecting different brands, including Pilzner, Chodské pivo, Budějovické pivo and Budějovický měštanský var, Českobudějovické pivo. 32

30 https://beerresearch.cz/en/pgi-ceske-pivo-czech-beer/
31https://www.mapa.gob.es/es/alimentacion/temas/calidaddiferenciada/studyeconomicvalueeuqualityshemes_tcm30-551420.pdf
32http://fpr.org.pl/storage/2018/05/What-you-should-know-about-EU-Protected-Food-Schemes.pdf

2. CASE OF MOZZARELLA DI BUFALA

Mozzarella di Bufala manufacture is a little industry supported by the creativity and initiative of the locals. The Consorzio Tutela Mozzarella di Bufala Campana, a group authorized by the Italian Ministry of Agriculture and Forestry, provided protection and regulation and guaranteed the product's provenance and legal standard of identity as being made exclusively from buffalo milk.

There are about 200 producers of mozzarella di bufala di Campana, of which 50% are Consortio members (membership is optional). An estimated 20,000 people work in the sector, which generates sales of 500 million USD. The buffalo mozzarella industry is safeguarded by the Consortium, which provides technical support to cheese producers and manufacturers, and oversees the proper use of the designation of origin. The underlying concern when requesting GI registration with the EU is to join the ranks and collaborate on quality policy and promotion.

Buffalo cheese contributed 4% to sales value and growth to the GI cheese market. This is the only buffalo cheese classified as GI in the EU28.33 Moreover, in CETA with Canada Mozzarella di Bufala Campana is among eleven Italian cheese, namely Asiago, Fontina, Gorgonzola, Grana Padano, Mozzarella di Bufala Campana, Parmigiano Reggiano, Pecorino Romano, Pecorino Sardo, Pecorino Toscano, Provolone Valpadana, and Taleggio, which are being protected,34



Mozzarella di Bufala

Source: https://www.italiapopolsku.com/mozzarella-di-bufala-3/

33https://www.mapa.gob.es/es/alimentacion/temas/calidad-diferenciada/studyeconomicvalueeuqualityshemes_tcm30-551420.pdf 34 https://onlinelibrary.wiley.com/doi/full/10.1111/ajae.12226 35 https://www.qualigeo.eu/en/product/farina-di-neccio-della-garfagnana-pdo/

3. FARINA DI NECCIO DELLA GARFAGNANA: GI PROTECTION FOR A PROCESSED INGREDIENT

The flour known as Farina di Neccio della Garfagnana PDO is made by grinding dry chestnuts of the Carpinese, Pontecosi, Mazzangaia, Pelosora, Rossola, Verdola, and other regional kinds.35

Only if it is the sole ingredient in this category and the Consorzio of "Farina di Neccio della Garfagnana" producers has given its approval may "Farina di Neccio della Garfagnana" be used in the sales designation of a composed food product. The Consorzio maintains a list of GI name users (producers, bakeries, pasta producers, etc.) and ensures that the GI name is used as an ingredient correctly. Producers have the option to specify in their specifications how the GI product will be created and distributed. In this instance, all of the formats listed in the product specification are protected.



Farina di Neccio della Garfagnana

Source: https://www.tasteatlas.com/farina-di-neccio-della-garfagnana

33https://www.mapa.gob.es/es/alimentacion/temas/calidad-diferenciada/studyeconomicvalueeuqualityshemes_tcm30-551420.pdf

34 https://onlinelibrary.wiley.com/doi/full/10.1111/ajae.12226

35 https://www.qualigeo.eu/en/product/farina-di-neccio-della-garfagnana-pdo/

4. TUSCAN EXTRA-VIRGIN OLIVE OIL: AGROTOURISM BOOST

Extra virgin olive oil from Toscano PGI provides the highest level of authenticity assurance. The consortium closely monitors the supply chain in Tuscany, from the harvest to the packing, and secures each bottle with its signature.

To determine whether the oil complies with PGI rules, it is subjected to a chemical and sensory examination (it is tasted by a panel of experts chosen by the Ministry of Agricultural, Food, and Forestry Policies). The end product is a 100% Tuscan oil with a strong connection to the region and a unique identity. The European accreditation PGI and stringent production guidelines guarantee Toscan PGI extra virgin olive quality.36

Parallel to this, it's thought that EU rural development programs helped to boost agrotourism in the Grosseto region (where olive oil is produced), which in turn boosted sales and, ultimately, olive oil output. The olive oil itself is seen as a crucial asset for the area's marketing campaign. Since Tuscan extra-virgin olive oil is frequently regarded as the standard for quality, PGI oil commands a higher price.

It is thought that the EU's protection of GIs will help to significantly reduce the opportunistic behavior of many bottling agents.37

Over the years, Olio Toscano PGI has been successful in integrating a large number of producers (up to 9,000), reaching certified volumes of up to 4,000 tons, or around 20% of all Italian olive oil with a protected classification. More than 40 PDO olive oils dispersed around Italy make up the remaining 80%. 38

³⁶ https://www.oliotoscanoigp.com/toscano-pgi-oil-characteristics/

³⁷https://lup.lub.lu.se/luur/download?func=downloadFile&recordOld=1334511&fileOld=1647280 38https://news.italianfood.net/2021/10/07/italian-olive-oil-producers-bet-on-regional-

geographical-indications/





Tuscan Extra-Virgin Olive Oil
Source: https://www.oliotoscanoigp.com/

5. KRANJSKA KLOBASA: SLOVENIAN STAKEHOLDERS' EFFICIENCY

The conflict between Slovenia, Croatia, Austria, and Germany over the sausage Kranjska klobasa was another example of the international strife that afflicted the Austro-Hungarian Empire.

Slovenia began registering Kranjska klobasa in March 2009, although the process was far from uncomplicated.

Kranjska (Land of Carniola) was successfully established by Slovenia (the Slovenian Ministry of Agriculture on behalf of the industry stakeholders) as a central Slovenian region inside the Habsburg Empire. Many written documents proving the product's uniqueness as well as proof of Kranjska klobasa's repute as a typical Slovenian product ranging from the second half of the 18th century to the present day were submitted to the EC.

The summary of the application for Kranjska klobasa was published in the Official Journal of the European Union on February 18, 2012, after the European Commission determined that the Slovenian substantiation was appropriate.

According to EU law, Member States and third parties have six months following the publication of the application to submit their challenge to the registration. Austria, Germany, and Croatia all made objections. Kranjska klobasa is now protected as a Slovenian product according to the European Commission's publication of its registration following talks with Austria, Germany, and Croatia. The phrases "Krainer," "Käsekrainer," "Schweinskrainer," "Osterkrainer," and "Bauernkrainer" are permissible for use by German and Austrian producers without time limits, however the terms "Kranjska" and "Kranjska kobasica" are not.



Kranjska klobasa

Source: https://podroze.onet.pl/ciekawe/slow enia-chorwacja-spor-o-kranjskakielbase/1w4rq16

6. FETA: GI OR GENERIC TERM? THE FIGHT OVER FETA

Greece began codifying the methods used to make feta cheese in the 1930s. Following the 1992 regulation establishing a system for protecting geographical indications (GIs) and other agricultural products in the EU, Greece soon sought to register the Feta name in the EU. The rules for the source of the milk and the production techniques of Feta cheese first came into force in the nation in 1988. Greece submitted a request to the EC in 1994 for the designation of Feta as a PDO, and it was approved in 1996. However, this didn't last long because of opposition from other EU nations. After a protracted period of IP issues, the Feta PDO was canceled in 1999, and its registration was renewed in 2005.39

39 https://www.wipo.int/ipadvantage/en/details.jsp?id=5578

The fight over feta has gone because cheeses made in Germany, France, and Denmark also go by the name of feta. These countries argue that feta is a generic term, just like Cheddar or Camembert.

The Greek Ministry of Agriculture then started putting together data and proof that feta was Greek-originated to support their claims.

It was formally determined in 2002, following the submission of this data, that feta cheese is a distinctively Greek product that can only be manufactured in certain regions of Greece in accordance with the given regulations. Five years were given to other countries to rename their "feta" cheese or cease manufacture.



The environment, the herds, and their interactions are all intimately known to farmers in Greece's feta-producing regions. Using this information, a standard production procedure was established and listed in national legislation, which served as the foundation for the Feta cheese PDO.

Source: https://www.wipo.int/ipadvantage/en/details.jsp?id=5578

⁴⁰https://www.eu-japan.eu/sites/eu-

japan.eu/files/The%20Benefits%20of%20Geographical%20Indications%20for%20Parmigiano%20Reggiano_Simone%20FICARELLI.pdf

⁴¹https://lup.lub.lu.se/luur/download?func=downloadFile&recordOld=1334511&fileOld=1647280 42 https://www.thespruceeats.com/parmesan-vs-parmigiano-591198

7. Parmigiano Reggiano: GI protection in practice

Parmigiano Reggiano is an Italian cheese that is native to the Emilia Romagna and Lombardy regions, specifically the Parma region. In accordance with Council Regulation (EC) No 510/2006 of March 20, 2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs, Parmigiano Reggiano has been a protected designation of origin (PDO) since 1996 throughout the entire EU territory.40

It was one of the PDO/PGI products with the biggest turnover in 2002, with 1.4 billion EUR. However, Parmigiano Reggiano cheese's significance extends beyond just its production value because it also stimulates other manufacturing industries, resulting in a chain whose combined market worth is estimated to be around 5 billion EUR.41

"Parmesan" is an English and American translation of the Italian "Parmigiano Reggiano".42 According to the EU's definition, cheesemakers outside the region are prohibited from using the term "parmesan" because Parmigiano Reggiano is a GI.43 Multiple decisions by the European Court of Justice have confirmed that "Parmesan" is not a generic term, and as a result, Parmesan production must adhere to a set of criteria and the cheese itself must fulfill requirements.



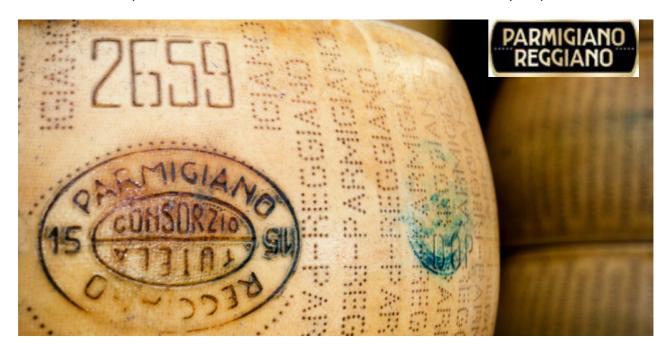
Parmigiano Reggiano

Source: https://www.viator.com/it-IT/tours/Parma/Parmigiano-Reggiano-Cheese-Factory-Small-group-Tour-From-Parma/d27234-5919P414

43 https://www.allens.com.au/insights-news/insights/2019/10/parmesan-by-any-other-name/

7.1 "CASTLE CHEESE" FAKE PARMESAN

An unexpected FDA inquiry was conducted in November 2012 at the "Castle Cheese" cheese factory in Pennsylvania. The investigators discovered that the items marketed as "100% authentic parmesan" in the biggest grocery shop in the nation had inferior fillers and replacements. In reality, the "100% grated parmesan cheese" sold by Castle Cheese was a blend of Swiss, mozzarella, white cheddar, and cellulose, which comes from wood pulp. The President of Castle Cheese admitted guilt and was given a year in prison and a fine of \$100,000 as punishment. The business filed for bankruptcy in 2014.44



How to distinguish real Parmigiano Reggiano from the fake "Parmesan"? After examination and approval by the Consortium, the name of the cheese, the production date, and the Consortium's mark of approval are imprinted in dotted letters on the rind of each genuine Parmigiano-Reggiano wheel. To view the stamped letters, always purchase complete pieces that still have some of the rind on them.

- Look for the logo of the Consortium.
- Find the batch number.

Source: https://foodmatterslive.com/article/parmigiano-reggiano-consortium-blockchain-traceability-labels-parmesan-cheese/

44 https://scholarship.kentlaw.iit.edu/cgi/viewcontent.cgi?article=1182&context=ckjip

7.2 "KRAFT PARMESAN CHEESE": TRADEMARK BLOCKED

The name "Kraft Parmesan Cheese" went up for trademark registration in Ecuador with the help of Kraft Foods Group Brands LLC. "Consorzio del Formaggio Parmigiano Reggiano", which is in charge of safeguarding the PDO "Parmigiano Reggiano" throughout the world, however, filed a lawsuit against this application. The "Consorzio" said that the disputed sign was strikingly similar to the PDO and that the American business was unfairly exploiting the PDO's reputation, quality, and other attributes, which are solely a result of the region in which it is produced.

Although some ingredients remain the same, Kraft Foods found a means to cut the production time from 10 months to 6 to cut the production costs. The president of the Italian Consorzio del Parmigiano-Reggiano, Andrea Bonati, stated to the FDA "Cheese produced under a six-month aging process may be produced faster, in greater quantities and for a cheaper price; but it will not be Parmesan cheese".45

The registration of the sign "Kraft Parmesan Cheese" was denied because the IP Office of Ecuador acknowledged the Consortium's allegations.46 Since it reiterates the basic significance of the connection between product, geographic location, and Designation of Origin, the decision is a significant triumph for the system of Geographical Indications in the American continent. This represents a turning point for an international strategy that will benefit all Geographic Indications as well as the Parmigiano Reggiano PDO.47

⁴⁵ https://www.chron.com/business/article/Kraft-wants-to-speed-the-making-of-Parmesan-but-1491656.php

⁴⁶ https://intellectual-property-helpdesk.ec.europa.eu/news-events/news/metalgial-vs-meta-parmigiano-reggiano-wins-over-kraft-parmesan-cheese-2022-03-10_en 47 https://www.parmigianoreggiano.com/news/parmesan_ecuador/

8. PROSCIUTTO DI PARMA: PREMIUM PRICE AND RURAL DEVELOPMENT

Prosciutto di Parma was registered as a PDO in the EU on June 12, 1996. In order to defend and secure the quality of their hams, producers that use and protect the traditional processing method formed the Parma Ham Consortium in 1963. The Consortium maintains compliance to production guidelines, including precise pig selection, to produce a high-quality, authentic, and entirely natural product.48

In 2021 The director general of the Prosciutto di San Daniele PDO Consortium, Mario Cichetti, stated, "We totaled a production of 2.6 million pork legs, growing by + 3.1% over 2020. Sales, on the other hand, grew by +12.5%, settling for a volume over 2.8 million legs".49

Let's look into the numbers in details, which are displayed on the official Parma Ham Consortium website:

- production value 800 million EUR
- export turnover 290 million EUR
- revenue from consumer sales 1.500 million EUR
- Parma Ham producing companies 140
- pig farms 3600
- abbatoirs 78
- processing workers in the sector 3000
- employees in the whole branch 5000. 50

The price of the pork leg from the BEDOGNI EGIDIO S.P.A., which is one of the Parma Ham Consortium producers, is approximately 265 EUR.51

⁴⁸ https://hal.archives-ouvertes.fr/hal-01601694/document

⁴⁹ https://news.italianfood.net/2022/02/10/prosciutto-di-san-daniele-pdos-sales-back-to-pre-covid-levels/

⁵⁰ https://www.prosciuttodiparma.com/parma-ham-consortium/

⁵¹ https://www.soloprodottiitaliani.it/salumi/bedogni-egidio-/8675-prosciutto-crudo-di-parma-bedogni--24-mesi-disossatopressato-egidio-bedogni-.html



Prosciutto Di Parma: Bedogni Egidio.

Source: https://bedogniegidio. it/

The consumer survey demonstrates that customers are willing to pay more to extract a price premium for the labeling of PDO. Consequently, this provides proof that GI products have an impact on the earnings and the creation of jobs in rural areas.52

9. BEST POLISH PRACTICES

9.1 POLSKA WÓDKA: "POLISH VODKA" IS NOT THE SAME AS VODKA FROM POLAND

In accordance with the 2006 Law on Manufacturing of Spirit Liquors and Registration, Polish Wódka was first protected as a distinctive Polish product as Geographical Indications of Spirits and Liquors: & Protection.

2013 saw the entry into force of the 2006 amendment to the "Law on the Manufacture of Spirits and Registration and Protection of Geographical Indications of Spirits". The amendment specified the requirements for pure and flavored vodkas, which can have the geographical indication "Polska Wódka/Polish Vodka" on the label.

52https://lup.lub.lu.se/luur/download?

func=downloadFile&recordOld=1334511&fileOld=1647280

Vodka can be made from many raw materials. It can also be produced all over the world. Defining the conditions that a beverage must meet in order to be referred to as Polish Vodka was intended to prevent producers who, for example, import spirit or use raw materials other than those typical for the Polish region for its production from taking advantage of this designation.53

According to the definition from 2013, Polish Vodka/Polish Vodka is:

- 1) Vodka containing no additives other than water or
- 2) flavored vodka with a predominant flavor other than the flavor of the raw materials used in its production, containing natural flavoring agents and, in special cases, colorants, with a maximum sugar level expressed as invert sugar not exceeding 100 grams per liter of pure alcohol obtained from ethyl alcohol of agricultural origin obtained from wheat, rye, triticale, barley and oats or with potato, grown on the territory of the Republic of Poland, all stages of the manufacture of which take place on the territory of the Republic of Poland and which may be aged to give it special organoleptic characteristics.54 In addition, according to the specified criteria, Polish Vodka is only a product with the mandatory Polish Vodka/PolishVodka inscription on the label on the bottle.

Optionally, they may also appear there:

- the mark of the Polish Vodka Association (voluntary program)
- the EU logo of the Protected Geographical Indication
- the inscription "Protected Geographical Indication" or the abbreviation PGI (or. ChOG).

⁵³ https://www.40procent.pl/13-stycznia-czyli-definicja-polskiej-wodki/ 54 https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/wyrob-napojow-spirytusowychoraz-rejestracja-i-ochrona-oznaczen-17313214/art-38



Wyborowa Vodka meets the stringent requirements of the Protected Geographic Indication - Polish Vodka. It is produced according to a traditional recipe from rye from Poland, with water being the only additive. The bottle is marked with the mandatory "Polish Vodka" inscription as an indicator of the GI.

Source: https://www.portalspozywczy.pl/alkohole-uzywki/wiadomosci/wodka-wyborowa-w-nowej-odslonie,175887.html

In 2019 an EU-China agreement was signed on mutual protection of the first 100 GIs from the EU. Polska Wódka has been included among the first 100 European Protected Geographical Indications in China.55

55 https://handelextra.pl/artykuly/256683,polska-wodka-to-nie-to-samo-co-wodka-z-polski

51

9.2 OSCYPEK FOR POLAND, OSTIEPOK FOR SLOVAKIA

Oscypek is a seasonal sheep cheese. The milk used in its production comes exclusively from sheep of the Polska Owca Górska (Polish mountain sheep) breed. If cow's milk is used in the production of oscypek, it can make up at most 40% of the milk used in the production of the cheese. This milk then comes only from cows of the breed Polska Krowa Czerwona (Polish red cow) that graze on mountain pastures together with the sheep. The production season of oscypek lasts from May to September.56 The expertise, tradition, know-how passed down from one generation to the next, and the unique and remarkable skills of the baca (head shepherds) are all connected to the production of the Oscypek. The endemic plants, which can only be found in the Podhale region, make up the meadow, pastureland, and mountain pasture flora, which has a huge impact on the final flavor of oscypek.

The application for entering the oscypek as PDO was submitted by the Regional Union of Sheep and Goat Breeders from Nowy Targ back in 2006, however the group of producers faced some obstacles. After positive verification of the application, the Commission published a shortened version in the Official Journal of the European Union. From the moment of publication, for six consecutive months, all Member States interested in the proceeding may object to the registration of a geographical indication and/or designation of origin. The Slovakian government had filed such an objection to the registration of oscypek. Slovaks feared that registering oscypek would block their ability to produce, sell, as well as obtain legal protection for a similar type of cheese to oscypek, a Slovak type of cheese produced under the name oštiepok. 57

https://www.ppr.pl/rolnictwo/produkcja-zwierzeca/rejestracja-nazwy-oscypek-jako-chronionej-nazwy-pochodzenia-144620

⁵⁷ https://sadeczanin.info/gospodarka/oscypek-nie-tylko-podhale-sadecczyzna-ma-do-niego-prawa?page=0%2C1

Representatives of the agricultural ministries of Poland and Slovakia already signed an agreement back in December 2005, recognizing Slovak and Polish cheese as two different products. According to this arrangement, Poles could register in the EU oscypek, and Slovaks slovenský oštiepok. The differences are not insignificant. Oscypek is made from the milk of Polish mountain sheep with an admixture of up to a maximum of 40 percent of milk from Polish red cows, oštiepok can contain up to 80 percent cow's milk. Secondly, oscypki are double cone shaped, while oštiepki are barrel-shaped. Third, the method of production is different: oscypki are made traditionally in bacówka (shepherds' huts), while oštiepki are produced on an industrial scale by Slovaks in dairies.58



Oscypek

Source: https://www.oscypki.pl/produkt/oscypki/

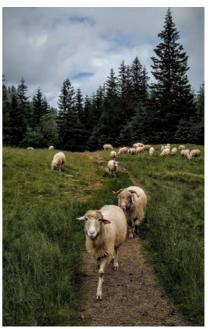
The Slovak government claimed that Poland could not register and protect the name oscypek because it has become a generic name. Eventually, after government negotiations, the Slovaks dropped their opposition objections when they received Warsaw's assurance that the name of the cheese would be used only in Polish

58http://admin.produkty-tradycyjne.pl/dir_upload/site/files/II-PRZEWODNIK-KONSUMENTOW.pdf

would not be translated into other languages. Ultimately, slovenský oštiepok and oscypek were registered a year later, in 2008, as a Protected Geographical Indication (slovenský oštiepok) and Protected Designation of Origin (oscypek).

Oscypek was entered in the European Commission's Register of Protected Designations of Origin and Protected Geographical Indications under Commission Regulation No. 127/2008 of February 13, 2008.59





Bacówka in Kuźnice and Kalatówki - Andrzej Staszel - a shepherd with more than 20 years of experience, continuing the family tradition from his grandfather, and his lineage hides the family recipe for unique oscypek.

Source: https://www.rmf.fm/bajeczna-polska/news,34534,tatry-wycieczka-dla-calej-rodziny-bajeczny-spacer-z-kuznic-pod-giewont.html

⁵⁹ https://sadeczanin.info/gospodarka/oscypek-nie-tylko-podhale-sadecczyzna-ma-do-niego-prawa?

page=0%2C1#:~:text=Oscypek%20zosta%C5%82%20wpisany%20do%20prowadzonego,z%20dnia%2013%20lutego%202008r.

9.3 SUPERVISION OF THE COMPLIANCE WITH THE SPECIFICATIONS IN POLAND

Inspection of the compliance of the production process with the specifications of products having a protected designation of origin, protected geographical indication or being traditional specialties guaranteed, is carried out at the request of the producer by inspectors from the locally competent Provincial Inspectorate of Commercial Quality of Agricultural and Food Products (WIJHARS) or by inspectors of an authorized certification body, which are private certification bodies (list available at

https://www.gov.pl/web/ijhars/wykaz-upowaznionych-jednostek-certyfikujacych). The choice of the inspecting entity is made by the manufacturer.

Conformity inspection aims to verify that the product is manufactured in accordance with the requirements of the specification. It consists of checking the facts on the spot, inspecting relevant documents (e.g., records kept by the manufacturer of the various stages of production) and/or interviewing the manufacturer to obtain the necessary information to assess the facts.

The scope, frequency and type of inspections depend on the specifics of the production process of a given product (e.g., the number of production stages, the degree of processing) and should be specified in the product specifications by the manufacturers.

The directive regarding the requirements to establish a private certification body with a Moldovan base in accordance with ISO/IEC 17065:2013 is available at:

https://acreditare.md/public/files/docemente_de_referinta/4-DR-OCpr-04-17065-ed-2.pdf

⁵⁹ https://sadeczanin.info/gospodarka/oscypek-nie-tylko-podhale-sadecczyzna-ma-do-niego-prawa?

page=0%2C1#:~:text=Oscypek%20zosta%C5%82%20wpisany%20do%20prowadzonego,z%20dnia%2013%20lutego%202008r.



MANUAL III: FOOD SECURITY SYSTEM AND CERTIFICATION PROCEDURES IN MOLDOVA

The government regulates subsidies, implements and monitors food protection, crop variety testing, approval of new varieties of fruit trees, as well as fiscal policy, registration and regulation of new plantings, agricultural export quotas through its agencies organizations. Both the Institute of Standardization and the Scientific-Practical Institute of Horticulture work to establish national standards. developing and harmonizing them to ensure the quality of certified seedlings and producers. Regulation and control for food safety, plant protection and plant quarantine, seed control and the quality of primary products are carried out by the National Agency for Food Safety (ANSA). Each region also has a Health Surveillance Directorate responsible for implementing ANSA interventions.60

⁶⁰ https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---sro-budapest/documents/publication/wcms_795508.pdf

1. INSTITUTIONAL AND LEGAL FRAMEWORK

The FSS regulatory (Food Safety and Standards Regulations) and enforcement system's top priorities are public health and food safety. These worries are related to trade laws since goods with animal or plant origins can spread diseases to people. The ability of the nation to regulate, oversee, and control the safety of food imports and exports is demonstrated by its capacity to monitor and control foodborne diseases.

Sanitary and phytosanitary measures in Moldova are under the direct control of three institutions: the Ministry of Health, the Ministry of Agriculture and Food Industry, and the State Republican Institute for Phyto-Sanitary Quarantine.

Food safety falls within the responsibility of the Ministry of Health. Plant diseases and pest control in Moldova are handled by the State Plant Protective Service, which is a part of the Ministry of Agriculture and Food Industry, and inspection, quarantine. Certification of goods sold abroad are handled by the State Republican Institute for Phyto-Sanitary Quarantine (Diagram 2).

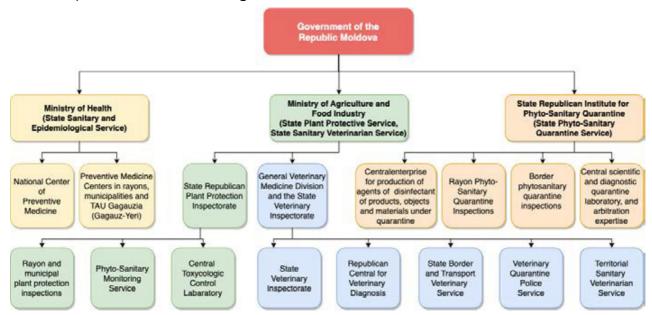


Diagram 2: Moldova's institutional structure for managing sanitary and phytosanitary measures

Source: http://web.worldbank.org/archive/website01535/WEB/IMAGES/MDFOOD-2.PDF

The National Institute of Standardization and Metrology, sometimes known as "Moldova Standard," is in charge of regulating all standards in Moldova, especially those related to food. The duties of each of these institutions, including certification, sanctioning, and punishment, are outlined in different Moldovan laws. Each law is accompanied by implementing rules published by the relevant ministries or public agencies.

Moldova has two categories of certification requirements. The first concerns class certification (sanitary, phytosanitary and veterinary) issued by the agencies responsible for SPS measures. The second refers to certification that products comply (conformity assessment) with Moldova Standard requirements. The government states that certification requirements are identical for local and imported products. The further chapter describes certificate of conformity, sanitary and phytosanitary certificates in detail.

1.1 CERTIFICATE OF CONFORMITY (CERTIFICAT DE CONFORMITATE)

Certificate of Conformity or Certificate of Conformance or CoC is a document that certifies that a properly identified product has been subjected to conformity assessment procedures, and that the product with the specified requirements applicable to a certain field. Those requirements are specified in the corresponding Laws.

Policies in the plant sector are stated at https://maia.gov.md/ro/content/politici-%C3%AEn-sectorul-vegetal.

Policies in the livestock sector can be found at https://maia.gov.md/ro/content/politici-%C3%AEn-sectorul-zootehnic.

The assessment of product conformity in the Republic of Moldova is carried out according to Law no. 235 of 01.12.2011. Link to the law: https://www.legis.md/cautare/getResults?doc_id=95243&lang=ro. It can be mandatory or voluntary.

The list of mandatory products is regulated by the DECISION No. 1469 of 12-30-2004 regarding the approval of the Nomenclature of products from the regulated field, subject to mandatory compliance certification. The full list of products, which counts 244 positions, for mandatory Certification of Conformity is available at https://www.legis.md/cautare/getResults?doc_id=31483&lang=ro

Some of examples are: milk and cream, not concentrated, without added sugar or other sweeteners, milk and milk cream, concentrated or with added sugar or other sweeteners (sweeteners), cheeses and curds, natural honey, butter and other fatty substances from milk; dairy pasta for canapés, coffee, whether or not roasted or decaffeinated; coffee pods, coffee substitutes containing coffee, regardless of the proportions of the mixture, tea, even flavored etc.61



Products for mandatory Certification of Conformity

Source: https://www.freepik.com/pre mium-photo/dairy-productsmilk-cheese-butter-fruitswith-honey-backgroundhay-various-typesc_16295003.htm

- The certification process is done to achieve the following goals:
- a) to facilitate economic, international technical-scientific collaboration, and market integration while also providing the necessary framework for economic agents to operate on the Republic of Moldovan market;

59

https://www.legis.md/cautare/getResults?doc_id=31483&lang=ro

- b) to safeguard national security, prevent fraud, uphold rights, achieve population goals for life, health, and prosperity, and protect the environment;
- c) to guard against inferior or counterfeit goods entering the home market;
- d) to aid consumers in making product decisions;
- e) to verify the suppliers' claims about the product quality.62

For instance, Law No. 237 of 08.11.2018 (see Policies in the plant sector above) on the control of compliance with quality requirements for fresh fruit and vegetables describes the quality requirements and certificate of conformity for this group of products.

The control regarding compliance with the quality requirements of the products is carried out by the National Agency for Food Safety, including the territorial subdivisions.

Compliance checks are carried out selectively, based on a risk analysis and with an appropriate frequency. The control body prepares and monitors the plan for carrying out controls at the stages of the food chain according to the methodology regarding the state control over the activity of the entrepreneur based on the analysis of the risks related to the field of competence of the National Agency for Food Safety, approved by the Government.

- The controls are established according to the following risk criteria:
- a) the nature of the product, the production period, the price of the product, the climatic conditions, the packaging and handling operations, the storage conditions, the country of origin, the means of transport and the volume of the lot;

- b) the turnover, the location of the economic agent in the food chain, the volume or value of the traded products, the range of products, the delivery area or the type of operations carried out, such as storage, sorting, packaging or trading;
- c) period of activity in the respective field;
- d) the date of the last inspection and the respective findings, including the number and type of defects found, the usual quality of the products sold and the level of technical equipment used;
- e) the reliability of the product quality assurance system or the selfcontrol system of the economic agent;
- f) the place of the control, especially for the points of entry into the country or the place where the products are packed or loaded.
 - The existence of a certificate of conformity of the quality of fresh fruits and vegetables according to art. 15 is considered a factor to reduce the risk of non-compliance with quality requirements for products.
 - The risk analysis is carried out according to the information contained in the database and includes a classification of the economic agents according to the risk criteria.
 - The control body will develop, in advance, the procedures for estimating the risks of non-compliance with the quality requirements of the lots and, based on a risk analysis for each risk category, the list of economic agents, indicating the risk criterion and the periodicity carrying out the controls.

THE CERTIFICATE OF CONFORMITY OF THE QUALITY OF FRESH FRUITS AND VEGETABLES

• The certificate of conformity of the quality of fresh fruits and vegetables is issued, upon request, based on the control results. This certificate is an optional document, which economic agents can obtain for products intended for import, export/re-export or in other cases where the economic agent wants to additionally attest that the products meet the quality requirements.

- The certificate of conformity of the quality of fresh fruits and vegetables is issued free of charge by the control body on paper, with a holographic signature, or in electronic format, with an electronic signature.63
- Each certificate of conformity of the quality of fresh fruits and vegetables issued has a serial number, the stamp of the control body and the signature of the person authorized for this purpose.64

Conformity assessment is carried out by product certification bodies, accredited according to SM SR EN ISO/IEC 17065:2013. The list of all certification bodies in Moldova is available under the following link: https://acreditare.md/public/files/registre/1-Registru-OCPR-ACREDITATE-18.05.2020.pdf & on the website of the National Center for Accreditation of the Republic of Moldova (MOLDAC) https://acreditare.md/ru/register_category/organisme-decertificare-a-produselor/



63

64

Exemplu de Certificat de Conformitate

Source:https://5mglobal.com/type-approvalmoldova/

http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=378506

http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=378506

1.1.1 MARK OF CONFORMITY

The SM conformity mark is applied only by the manufacturer or his authorized representative, according to the principles and rules established by the Law No. 235 of 01.12.2011. National marks of conformity for mandatory (statutory) and voluntary certification in the National Certification System are developed by the national certification body. The graphic image, dimensions and rules of use of the national marks of conformity shall be established in accordance with the respective standard.

National marks of conformity are the property of the national certification body and are used to mark products certified according to the rules of the National Certification System and according to this law.

The right to use national marks of conformity is transferred to the suppliers by the national certification body on the basis of the license agreement, drawn up and signed in accordance with the rules of the National Certification System.

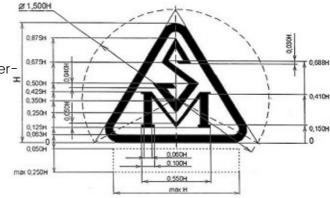
Information on registered national marks of conformity shall be published, in the prescribed manner, to ensure their legal protection.

The SM-mark (Figure 1) of national conformity, which demonstrates that the product conforms to the technical regulations or standards

laid down by legislation.65

Figure 1: The SM conformity mark

Source: https://madein.md/en/news/othernews/certification-of-food-products-inmoldova



65http://repository.utm.md/bitstream/handle/5014/1527/Conf_UTM_2016_I_pg306_309.pdf? sequence=1&isAllowed=y

1.1.2 PRODUCT CERTIFICATION STEPS

Product certification is achieved through the following steps:

1. Submission of application for product certification

To carry out the certification the applicant submits an application to the certification body set of normative documents in order to be certified the finished products. List of documents can be found at: http://e-cmac.md/serviciu-certificare-produse/#1506885692446-b5d105ed-1092

- Self-assessment questionnaire completed by the applicant (if applicable)
- Copy of the extract from the State Register of Legal Entities and the enterprise registration certificate
- Copy of the Operating Authorization
- Copy of the Health Notice and test reports (if applicable)
- Copy of the sanitary-veterinary authorization (for products of animal origin)
- Copy of the activity license (if provided by law)
- Technological instruction or technological scheme
- List of units of measurement and data on their verification
- Equipment list
- Any other documents related to the quality of the product

2. Analysis of the application and the documents submitted

The certification body shall examine the application and within a maximum of 15 days from the date of fulfillment of contractual obligations takes the decision on the application and informs the applicant thereof.

3. Decision on the application

All documents submitted by the applicant are examined by the experts of the certification body. If the documents are clear and concrete, the contract for certification is concluded between the applicant and the certification body.

4. Product identification

A team of experts from the certification body is formed to go to the company and identify the products to be certified.

5. Sampling

The sample shall be established by the sampling procedure, respecting the rules of identification and storage, marking, sealing of samples for testing and documentation of the sampling procedure shall be carried out according to the respective normative document by the expert or representative of the certification body.

6. Carrying out sample tests

Tests for the purpose of certification of products in the regulated area are carried out in accredited and designated testing laboratories. Tests for certification purposes shall be carried out in accordance with the test programme drawn up by the certification body.

7. Evaluation of the production process

Depending on the certification schemes, the production process is evaluated. Process assessment production shall be carried out in accordance with the procedures developed by product certification bodies.

8. Review of evaluation results

The certification body, on the basis of the examination of all the information gathered during the assessment process and any other information, takes the decision to issue the certificate of conformity.

9. Decision on the issue of the certificate of conformity

In the case of a positive decision, the certification body draws up the certificate of conformity and registers it in the register of certificates of conformity issued.

10. Issue of the certificate of conformity

The certificate of conformity for products is issued for homogeneous product groups that are manufactured by the same manufacturer and certified to some and the same requirements of normative documents.

11. Periodic evaluation of certified products

Periodic evaluation of certified products is carried out to assess whether the processes continue to meet the requirements under which they were certified and whether the holder of the certificate of conformity complies with the rules for the use of the MS national mark of conformity and the provisions of the contracts concluded.66

The term of the service depends on the category of products subject to conformity assessment (certification), the assessment methods applied and the time required to carry out laboratory tests, ranging from 3 to 30 days.

The certificate of conformity is issued no later than 5 days after obtaining the results of the tests performed by the laboratory.67

1.2 ANSA CERTIFICATION OF THE HARMLESSNESS OF PRODUCTS OF ANIMAL AND PLANT ORIGIN

National Food Safety Agency of Republic of Moldova (NFSA), also known as ANSA (Agenţia Naţională for Siguranţa Alimentelor), has regulatory and control authority over veterinary standards, animal husbandry, plant protection, phytosanitary quarantine, seed quality control, food product quality control, and animal feed. In 2016, the NFSA, which has its administrative offices in Chişinău, the country's capital, worked at key BCPs and monitored inland quarantine facilities.68

⁶⁶http://repository.utm.md/bitstream/handle/5014/1527/Conf_UTM_2016_I_pg306_309.pdf?sequence=1&isAllowed=y

⁶⁷ http://e-cmac.md/serviciu-certificare-produse/#1506885692446-b5d105ed-1092 68 https://unece.org/fileadmin/DAM/trade/Publications/ECE_TRADE_433E.pdf

1.2.1 SANITARY-VETERINARY CERTIFICATION

The provisions of Government Decision No. 385 of June 25, 2009 regarding some measures for the organization and performance of sanitary-veterinary certification and ANSA Order No. 158 of October 8, 2013, regarding the approval of the Regulation establishing sanitary-veterinary norms and some standardized forms, regulate the standards that must be respected when issuing sanitary-veterinary certificates.

In order to determine the health status of animals and the safety of food products of animal origin and other products subject to sanitary supervision, the sanitary-veterinary certification is therefore carried out on the basis of sanitary-veterinary control, laboratory investigations, and other sanitary-veterinary measures. It is mandatory on the local market that all food items of animal origin intended for human consumption be accompanied by the sanitary-

veterinary certificate form F2.69

Sanitary-veterinary certificate Form 2

Source:

http://old.ansa.gov.md/uploads/files/Siguranta/Certificat%20San-Vet_%20F-2.jpg



69 https://madein.md/news/diverse/ce-certificate-trebuie-sa-insoteasca-un-produs-alimentar-in-moldova

The application for the sanitary-veterinary certification can be applied via https://servicii.gov.md/en/service/003000948, which includes 6 steps:

1. Submission of the application

The applicant shall submit the application to the ANSA office at the following address: str. Mihail Kogălniceanu 63 MD-2009, mun.Chisinau, Republic of Moldova or to the following e-mail address: info@ansa.gov.md

2. Payment of the fee

The applicant (or his/her legal representative) pays the fee via the MPay service or at the bank. If the fee is paid at the bank, the applicant presents the proof of payment to the receptionist at the counter to be uploaded into the system, or uploads it into the system in person.

3. Completing the application and uploading documents

4. Examination of the application

The issuing authority (the specialist in the ANSA territorial subdivision) opens the case, examines the application and accompanying documents, and checks compliance with the conditions.

5. Sampling and investigation

When the specialist (official veterinarian) has taken samples and sent them to the laboratory, the applicant will receive a notification indicating the laboratory tests requested and their cost. The applicant pays the laboratory the additional payment by M-pay service or at the bank within the set deadline.

6. Issuing the permit. The specialist (official veterinarian) on the basis of the veterinary expert and/or negative laboratory results prepares, signs and transmits the permit to the applicant and the applicant (legal representative) receives an electronic notification, downloads the permit and confirms receipt of the document.

1.2.2 CERTIFICATION OF THE HARMLESSNESS OF FOOD PRODUCTS OF VEGETABLE ORIGIN

Agricultural raw material, food products and animal feed of plant origin, made available on the market, in the process of production, transportation or storage of which phytosanitary products and/or fertilizers were used, must correspond to sanitary regulations. Attestation of the conformity of agricultural raw material of plant origin, including fresh vegetables and fruits, and feed for animals of plant origin with sanitary standards is carried out on the basis of tests carried out by an accredited laboratory in this regard. At the request of the economic agent, compliance can be additionally certified by the harmlessness certificate.70

Description of the process for obtaining the certificate of the harmlessness is available at

https://servicii.dev.egov.md/en/service/ID470

Based on the tests performed by the recognized laboratory

https://acreditare.md/ru/, the conformity of agricultural raw materials of vegetable origin, including fresh vegetables and fruits, is

attested. 71

Harmlessness Certificate

Source:http://old.ansa.gov.md/ro/autorizari-si-certificate.html



70 https://www.legis.md/cautare/getResults?doc_id=107641&lang=ro 71https://madein.md/news/diverse/ce-certificate-trebuie-sa-insoteasca-un-produs-alimentar-in-moldova

ISO 9001 STANDARD

Republic of Moldova offers ISO 9001 Foundation Certification to those who can demonstrate their proficiency in Quality Management System (QMS). The ISO 9001 standard outlines the requirements that a business must meet in order to implement a QMS. Businesses that adhere to the ISO standard improve their operations through QMS in order to satisfy client expectations. The standard's most recent modification was made public in 2015. Organizations that have achieved ISO 9001:2015 certification must create, manage, and maintain QMS in order to adhere to the standard.72

The advantages of quality management system certification:

- satisfying the requirements of clients, business partners and legal requirements,
- increasing credibility and trust in the quality of products / services,
- increasing customer satisfaction,
- a greater understanding of the organization's processes, which implies firm management commitment, clear definition of responsibilities and authorities, improved internal and external communication, more efficient use of resources and reduction of non-compliance costs,
- creating the framework for continuous improvement.73

⁷² https://unichrone.com/md/iso-9001-foundation-training

⁷³ https://www.isotrans.ro/iso-9001-2015/?gclid=Cj0KCQiAsdKbBhDHARIsANJ6-jeXsi657O0VVa4Aexosqnt8d__ijf4UUuBczKYbh4J4amx2QExlkCEaAllKEALw_wcB

ISO 22000 STANDARD

ISO 22000 allows the development of a food safety management system including HACCP principles and food safety requirements (communication within the company, communication with suppliers conditions, food and customers. storage access to information/services provided, of food development new products/services).



The 7 principles of HACCP

Source: https://www.youtube.com/watch?v=UBVRrXQxh7E

Food safety is the concept that food products will not cause harm to consumers if they are produced and/or consumed in accordance with regulations.

The following HACCP principles developed by the Codex Alimentarius Commission find echoes in the requirements of the ISO 22000 standard:

- Coordination of risk analysis
- Definition of critical control points (CCP)
- Definition of norms / critical standards
- Definition of a monitoring system for CCP control

- Definition of corrective actions to be taken if monitoring shows that certain CCPs are not under control
- Determine control methods for effective implementation of the HACCP system
- Definition of the documentation related to all procedures and records according to these principles and their implementation
- The application of these principles leads to the identification, evaluation and control of all hazards (physical, chemical or biological) which may occur in food products throughout the food chain.74

OC produse din cadrul Î.S. ,Centrul de Metrologie Aplicată și Certificare"

Snejana Muzîca or E-CMAC, which is a certification body in Moldova provides assessment service for obtaining certification according to the international standards ISO 9001 and ISO 22000.

Beneficiaries: any legal entity, regardless of the form of organization and ownership, from the Republic of Moldova.

Provision of services: the service is provided on the basis of a service agreement concluded after submitting an application and paying for services.

The application can be submitted to the Management Systems Certification Body, both in paper and in electronic format at the address - st. E. Coca, 28, mun. Chisinau.

Service provision term: the analysis of the application is carried out within 15 working days from the date of registration. The time required to complete the audit is coordinated with the client at the time of registration of the application, but will not exceed one month from the closing meeting of the audit, at the site of the audit.75

74https://topconsulting.md/ru/service/iso-22000/

75http://e-cmac.md/ru/serviciu-certificare-sisteme-de-management/#1506887352818-ald4cda5-b551

List of required documents are:

- Questionnaire for Control Systems
- Information Sheet for Control Systems
- Application Model for Control Systems

For more information follow the link: http://e-cmac.md/ru/serviciu-certificare-sisteme-de-management/#1506887352818-a1d4cda5-b551

1.4 CERTIFICATE - ECO

The producer must submit a request to the Ministry of Agriculture and Regional Development. He then visits the inspection and certification body once the Ministry has approved the application. The producer is required to provide the ministry with documents attesting to his ownership of land for ecological production, his registration as an entity, and the creation of a business plan for his firm that will comply with environmental production standards. The inspection and certification body will check the producer's lands within a month. The conversion period then begins after the company signs the agreement with the inspection and certification body (3 years for perennial crops and 2 years for annual crops). The farmer obtains a certificate confirming that his products are eco-friendly after the conversion time.76

Organic product certification bodies are also determined by the the National Center for Accreditation of the Republic of Moldova (MOLDAC)

https://acreditare.md/en/register_category/organisme-decertificare-a-produselor-ecologice/

76 https://madein.md/en/news/eco-madein-md/eco-certification-in-moldova

The two certification bodies are: The Organic Products Certification Body "Eco Certificate" Alexandrina Levinscaia and Organic Products Certification Body "Control Union Dnjestr" SRL Oana Cornea.

The main purpose of the activity of The Organic Products Certification Body "Eco Certificate" is to provide a guarantee that the products certified by it are in accordance with the standards/normative documents in force regarding ecological agriculture, and the certification process is carried out in an independent, non-discriminatory, transparent and credible manner for the consumer.77





National logo for ecoproducts

Source: https://madein.md/en/news/eco -madein-md/how-todistinguish-and-verify-whetherthe-product-is-ecologicallycertified

National legislation regarding ecological agro-food production are as following:

• Law no. 115 of 09.06.2005 regarding ecological agro-food production describes organic agro-food production rules, methods and conditions. Available at:

https://www.legis.md/cautare/getResults?doc_id=115169&lang=ro

• GD no. 149 of 10.02.2006 for the implementation of the Law on ecological agro-food production, available at:

https://www.legis.md/cautare/getResults?doc_id=114152&lang=ro

• GD no. 1078 of 22.09.2008 regarding the approval of the Technical Regulation "Organic agro-food production and product labeling, available at:

https://www.legis.md/cautare/getResults?doc_id=114208&lang=ro

 GD no. 884 of 22.10.2014 for the approval of the Regulation on the use of the national trademark "Ecological Agriculture - Republic of Moldova", available at:https://www.legis.md/cautare/getResults? doc_id=114734&lang=ro

77 https://certificat-eco.md/



MANUAL IV: BIODIVERSITY OF CROPS IN MOLDOVA AND THEIR EXPORT POTENTIAL TO THE EU MARKET

1. BIODIVERSITY OF AGRICULTURAL CROPS IN MOLDOVA

The Institute of Genetics, Physiology and Plant Protection in Chişinău (IGFPP), the Research Institute of Horticulture and Food Technologies (ISPHTA), The Public Research Institute for Field Crops "Selection" (Selecta), and the Institute of Phytotechnology "Porumbeni" all maintain experimental fields and seed collections where the Republic of Moldova's agricultural biodiversity for vegetables is preserved exsitu.

The most varied crops grown in Moldova are corn (Zea mays L.) — 279 varieties, plus 50 varieties of sweet corn (including 3 supersweet varieties), sunflower (Helianthus annuus L.) — 212 varieties, tomato (Solanum lycopersicum L.) — 193 varieties (of which 16 varieties of cherry tomatoes), and grapes (109 varieties), according to the Catalogue of Plant Varieties of the Republic of Moldova.

There are 77 different varieties of apple, 63 various sorts of pepper (three of which are hot), 57 different kinds of cucumber, 37 multiple types of cherry (and 13 various kinds of sour cherries), 35 different sorts of watermelon, 16 different kinds of melon, 34 different kinds of walnut, 30 different kinds of onion (2 white, 2 red, and 1 sweet), 30 different kinds of plum, 26 different kinds of pea, 24 different kinds of pear, 24 different kinds of peache, 21 different kinds.

The list of foreign crop varieties with a high estimated export potential and Moldovan crop varieties suited for cultivation in Căuşeni and Stefan-Vodă districts is provided below, along with those whose export potential needs additional investigation.78

1.1 FRUITS Apples and pears

Foreign apple types like FLORINA, FUJI, GALA, GOLDEN DELICIOUS, GRANNY SMITH, IDARED, JONAGOLD, RED DELICIOUS, and REINETTE SIMIRENKO are currently the majority of the country of Moldova's exports. To establish the export potential of local cultivars, more research is required. The list includes the long-lasting local traditional varieties CALVIL DE ZPAD, DOMNETI, NISTRE, and IGANCA that are maintained by ISPHTA.

Early varieties HELIODOR and ZORKA, regular SOKROVICE and BUTIRRA DE ROMA, and late NOIABRSKAIA and VÎSTAVOCINAIA are among the varieties of Moldovan pears that are advised for cultivation in Căuşeni and the Stefan-Vodă regions. The XENIA pear variety, which is likely listed in the catalog under the name NOIABRSKAIA, was tested in Holland against the well-known Conference variety and had excellent results.

Biodiversity of crops in Moldova and their expiry potential by Alexandra Godina, August 2022

The XENIA pear variety, which is likely listed in the catalog under the name NOIABRSKAIA, was tested in Holland against the well-known Conference variety and had excellent results. Due to its resistance to bacterial burn, pear scab, fungal diseases, and frost, this variety is perhaps the most promising for production and export.



ISPHTA maintains the following registered apple rootstocks: MR DE PDURE I SOIURILE, OMOLOGATE, M-4, M-7, M-9, M-26, M-106, and BUD 62-396.

Xenia pear

Source: https://www.freshplaza.com/europe/article/9244454/focus-this-year-on-expanding-sales-of-xenia-pears-in-southern-europe/

ISHTA maintains the following registered pear rootstocks: PR SLBATIC, GUTUI tip A, GUTUI tip BA 29, and PR FRANC (Pyrus communis L.).

The Association of Producers and Exporters of Fruits has suggested cultivating the following apple varieties in Moldova for 2022 that are listed in the EU Frumatis Catalog: GALA SCHNITZER, BAIGENT, GOLDEN KLON B, GOLD PINK, RED IDARED, NAJDARED, RENO 2, EVASNI, RED TOPAZ, SIRIUS, Japanese crabapple rootstock (Malus floribunda) HONEYCRISP, LUNA, MORGENDUFT DALLAGO, GALMAC, and BAY 3484; PROFESSSOR SPRENGER, RED SENTINEL, GOLDEN GEM, G 11, G 41, and G 202.

The following pears are advised: SANTA MARIA, CARMEN, ALEXANDER LUCAS, and MAX RED JOJO, JOJO, HAGANTA, TOPEND PLUS, PRESENTA, TOPFIVE, TOPTASTE, BARTLETT, UTA, HARROW SWEET, and HAROMA. Currently, numerous additional kinds are being tested.79

Biodiversity of crops in Moldova and their expiry potential by Alexandra Godina, August 2022

Table grapes

The Research Institute of Horticulture and Food Technologies (ISPHTA) maintains several local grape varieties, including KIMI LUCISTÎI and CODREANCA, which are regarded as the best for fresh consumption, as well as the new seedless varieties APIREN, which are suitable for both fresh consumption and the production of raisins. These varieties include APIREN ROZ, APIREN ALB, APIREN NEGRU DE GROZETI, APIREN ROZ TIMPURIU, and APIREN BASARA ALB DE SURUCENI, MOLDOVA, and a fresh variety called MUSCAT DE BUGEAC are other well-liked regional types with export potential. The following ISPHTA-maintained cultivars originate from other countries but are nonetheless regarded as high-quality: ROMULUS, VICTORIA, MUSCAT DE HAMBURG, and CARDINAL (origin USA).



Codreanca Grape

Source: https://moldovafruct.md/en/pro duct-category/fruitsuppliers/struguri-de-masa/

Plums

Early varieties CHIINIOVSCAIA RANNIAIA, POZDNIAIA HRAMOVA (which has the longest shelf life), UDLINIONNAIA (long shelf life), VINETE DE MOLDOVA (long shelf life), VINETE DE COSTIUJENI (new, long shelf life), and PAMIATI VAVILOVA are among the local varieties maintained by ISPHTA and advised for cultivation in Căuşeni and Ștefan-Vodă areas.

Though its export potential needs to be further investigated, the new SUPER PREZIDENT variety with an extended shelf life appears to be quite promising.

The plum varieties mentioned in the EU Frumatis Catalog that Moldova is advised to cultivate include the Japanese plums CRIMSON GLO and ANGELENO, as well as the rootstock REPLANTPAC (Prunus cerasifera x Prunus dulcis).

Apricots

The early varieties with a longer shelf life include VASILE COCIU (new) and CODREAN. The local varieties maintained by ISPHTA and recommended for cultivation in Căuşeni and Stefan-Vodă areas include varieties with short shelf life (that could be considered for drying and other processing), such as the very early BUCURIA, early DETSKI, CHIINIOVSCHI RANNII, MOLDAVSCHII OLIMPIE, NADEJDA, and CODREAN (recommended for its excellent taste). KRASNOCIOKII (unknown origin, short shelf life, but recommended for its excellent taste) and DACIA (long shelf life, recommended for its good taste) are two examples of medium varieties. Late varieties include varieties with short shelf life COSTIUJENSCHII and RADUGA, and SULMONA (long shelf life).

Peaches

Variety with limited shelf life (may be considered for processing): very early ALB TIMPURIU, early CODRU, IULSKI and UROJAINÎI JOLTÎI, medium MOLDOVA and SOFIA, and suggested for growing in Căuşeni and Stefan-Vodă districts and are maintained by IPSHTA. The shelf lives of the late variants GLBENICA and MOLDAVSCHII POZDNII are longer.

Popular peach cultivars produced in Moldova that aren't listed in the catalog include: MADELEINE POUYET (France), SPRINGCREST, COLLINS, CARDINAL, JERSEYLAND, REDHAVEN, SUNCREST and FAYETTE (US origin), FLACRA and SUPERB DE TOAMN (by Baneasa Research Station, Romania)

Quince

AURIU, CODREANCA, COMETA, IANTARNAIA MOLDAVII, IUJANKA, OLGA, URUNCIUKSKAIA, UROJAINAIA, UROSOK, and ZAREA are some of the regional types that ISPHTA maintains.

Additionally, ISPHTA maintains the following registered rootstocks: GUTUI tip BA 29 and GUTUI FRANC (Cydonia oblonga Mill.).

Cherries

Sweet cherries (Prunus avium L)

The varieties that could be recommended for export include KORDIA, REGINA, LAPINS, VERA® and TAMARA. Three of these varieties are registered in Moldova: early KORDIA (origin Research and Breeding Institute of Pomology, Czech Republic, maintained by ISPHTA) and LAPINS (origin Bulgaria, maintainer American genetics S.A. Seed breeding&production) and later variety REGINA (origin Italy, maintained by ISPHTA).

Local varieties included in the Catalogue of Plant Varieties of the Republic of Moldova are LIVĂDEANCA, MASLOVSKAIA and RECORD, all maintained by ISPHTA.

The RECORD variety has the longest storage duration, which is important for export. It produces creamy-red 6-7g berries of good

taste value. Unfortunately, there

is no description of other Moldovan local varieties from the Catalogue, further research is needed to investigate their export potential.

Kordia Cherry

Source:

https://www.rootsplants.co.uk/products/kordia-cherry-tree



Registered rootstocks maintained by ISPHTA: CIREŞ SĂLBATIC, COLT; CIREŞ FRANC (Prunus avium L.); GISELA 5 and GISELA 6 (Prunus cerasus x Prunus canescens); MAXMA 14 and MAXMA 60 (Prunus fontanesiana).

Other important varieties of European cherries cultivated in Moldova include very early FRUHESTE DER MARK and BIGARREAU MORREAU, early SAM, medium RUBY, GERSMERSDORF, STELLA AND STELLA COMPACT, and SILVA. The most popular yellow variety is DIONISEN. There are also a few autumn varieties under a generic name "autumn sweet cherries", which are worth further research.

Sour cherries (Prunus vulgaris Mill.)

Out of 13 varieties listed in the catalogue suited for cultivation in Căuşeni and Ştefan-Vodă areas, one is local – the new very early variety MĂRIOARA, maintained by ISPHTA. Registered rootstocks are maintained by ISPHTA: MAHALEB.

Melons and watermelons

Special consideration should be given to the very early and very late types, particularly those that are resistant to low or high temperatures and sunburn, to better compete with the EU farmers.

The Pridnestrovian Scientific Research Institute of Agriculture PNIISH is the creator and preserver of the regional melon cultivars MARIA, PAMIATI PANGALO, and PRIDNESTROVSCAIA. To assess their export potential, additional desk study would be required. The most recently registered non-local melon varieties include MARIA and OKSANA, as well as the early PASSPORT (Hollar Seeds) (Enza Zaden, Holland).

The Catalogue exclusively lists watermelon types from abroad, all of which are described as being extremely sweet, having a superb flavor, and producing large amounts.

The most intriguing varieties are sweet CRIMSON SWEET with few seeds, super-early BONTA with thick leaves offering superb protection against sun and temperature extremes, and mini seedless and transportable EXTAZY by Hazera Seeds, super-early, resistant to low temperatures CRIMSTAR (Sakata Vegetables Europe, France).

1.2 BERRIES

American blueberry

The four varieties listed in the catalogue are of American origin, and maintained by ISPHTA are suitable for cultivation in Căuşeni and Ştefan-Vodă areas: BLUECROP, BLUEGOLD, BRIGITTA BLUE and DUKE. They are grown on acid soils with pH 4.5–5.5.

Strawberry

GORELLA (Dutch origin), RED GAUNTLET (Scottish origin) and SENGA SENGANA (German origin) – varieties maintained by ISPHTA.

Varieties listed in the EU Frumatis Catalog recommended for cultivation in Moldova: ONEBOR, CLERY, AROSA, ALBA, ALBION and SAN ANDREAS. Their suitability for cultivation in Căuşeni and Ştefan-Vodă areas demand further research.

Raspberry

Varieties listed in the EU Frumatis Catalog recommended for cultivation in Moldova: CAROLINE, LASZKA, RAFZAQU, JOAN J, RADZIEJOWA, SOKOLICA, POLANA and RUBIN. Their suitability for cultivation in Căuşeni and Ştefan-Vodă areas demand further research.

Blackberry

Only two local varieties are registered, both recommended for cultivation only in Central and Northern Moldova.

Varieties listed in the EU Frumatis Catalog recommended for cultivation in Moldova: TRIPLE CROWN, ARAPAHO, LOCH TAY, LOCH NESS, CHESTER, NATCHEZ and OUACHITA. Further research is needed as to the possibility of their cultivation in Căuşeni and Ştefan-Vodă areas.

Gooseberries

DONEŢKII KRUPNOPLODNII and DONEŢKII PERVENEŢ (origin Ukraine, maintained by ISPHTA)

Aronia/black chokeberry

Aronia is considered a superfruit. Two local varieties include ARONIA NERO CL (breeder and mainainer Pintilei Vitalie, Chişinău, tel.: +37369319134) and the new ALECSANDRINA (breeded and maintained by the National Botanical Gardens, Alexandru Ciubotaru Institute - GBNI).

Sea buckthorn

Sea buckthorn is considered a superfruit. The two new varieties ELISA and REGINA are breeded and maintained by GBNI. CLARA and DORA varieties, as well as the ANDROS variety recommended as a pollinator have been created by SC Primagia SRL (Arad-România) and imported by Popa Sergiu (Chişinău, str. Mirceşti 22/4, tel.: +37379737399).

1.3 NUTS

Walnut

Varieties originated and maintained by ISPHTA: CAZACU, COGÎLNICEANU, CALARAŞSCHI, CHIŞINIOVSCHI, CORJEUTCHI, COSTIUJENSCHI, SCHINOSCHI and TIHOMIROV. Varieties originated and maintained by GBNI: CODRENE, LUNGUIETE, and the new varieties DOLNA, DE BUIUCANI, DE VĂLCINEŢ, MICLEUŞENE, NISTRENE and SURPRIZ. Varieties originated and maintained by the State Forestry Enterprise largara: DE BRICENI, DE FĂLEŞTI, IARGARA, PESCIANSKI, RECEA. Varieties originated and maintained by the SRL Pepiniera Pomicolă Voinești: CARPATICA and OVATA.

Hazelnut

Three local varieties listed in the catalogue are created and maintained by the GŢ ,Druţă Ion Dumitru" (or. Căuşeni, str. Constantin Stere, 18, tel.: +37324321056, +37368010008): ADÎGEISKII-1, ATA-BABA and CERCHESKII-2. The breeder of a new variety IACOBAŞ is Griţcan Iacob (R. Moldova, r-nul Căuşeni, s. Taraclia, tel: +37368080054). The list also includes two newly-registered varieties of Italian origin maintained by the HAZELNURSE S.R.L.

Almond

All 8 local varieties are created and maintained by ISPHTA: ALB MOLDOVENESC, CRISTINA, F2 2052 (RIHTER 2052), HRAMOV STANDARD, DELICAT, METEOR, PERVENET HRAMOVA and VICTORIA. Registered rootstock maintained by ISPHTA: MIGDAL. Varieties listed in the EU Frumatis Catalog recommended for cultivation in Moldova: NONPAREIL, TUONO, FERRAGNESS and SUPERNOVA. Further research is needed as to the possibility of their cultivation in Căuşeni and Ştefan-Vodă areas.

1.4 VEGETABLES

Tomatoes

Generally, intense flavor, sweet taste, juicy and melting texture are the qualities that win the hearts of consumers. Cherry and cocktail tomatoes are more expensive, as well as coloured and rare varieties. Diversification is also very important, especially considering a harvesting schedule so that not all tomatoes ripen at exactly the same time. Shelf life and transportability shall also be taken into account.

The following local varieties with high export potential are worth considering for cultivation.

Cherry tomatoes: brown CIORNAIA JEMCIUJINCA, pink MALINOVAIA JEMCIUJINCA, ROZOVÎE CUPOLA and SINGARELLA, orange MEDOVIE IABLOCIKI, oval pink ROZOVAIA CAPELICA, and yellow ZOLOTAIA JEMCIUJINCA maintained by PNIISH; and two new decorative varieties CIREAŞCĂ and PRICHINDEL maintained by IGFPP.

Pink tomatoes: ROZOVÎI TUMAN, oblate-shaped DIKAIA ROZA and MARKIZA, and new oval-shaped ACŢIA maintained by PNIISH; PETRAMAK, new varieties STEFANI and MAKRISTA maintained by IGFPP; and ROZOVOE CIUDO maintained by Iurii Pancev.

Yellow tomatoes: oblate-shaped SOLNŢE by Iurii Pancev and ZOLOTOI ŞAR by PNIISH.

Orange tomatoes: new ILICA and MILORANJ varieties by IGFPP; cylindrical-shaped ORANJEVII HIT, long-cylindrical ZOLOTAIA OSENI and USLADA by PNIISH.

Brown tomatoes: BUDULAI variety by PNIISH.

Tomatoes of interesting shapes: long-oval VIUGA, cylindrical AMULET, GRAŢIA and ŢĂRĂNCUŢA, cube-shaped CARAMELICA by PNIISH; cylindrical JUBILIAR 60/20 by IGFPP; heart-shaped Piotr, PRIMADONNA and MALVA by Iurii Pancev.

Moldovan heirloom varieties not listed in the catalogue, but found interesting by growers abroad are worth further investigation, include: MOLDOVAN GREEN (registered in the EU), NISTRU (slightly-pink), GLORY OF MOLDOVA (carrot-orange) and SANDUL MOLDOVAN (pink).

It is also important to continue looking for other local traditional tomatoes, aiming at supporting valuable varieties and establishing seed production, including organic and for export. Potentially valuable varieties of non-Moldovan tomatoes are also worth exploring, as well as exchanging experience with other tomato breeders and seed producers.

Garlic

Three new local varieties BERECHET, MOLDOBELLA and VITASAN are created and maintained by IGFPP.

Peppers

Hot peppers

There is only one local variety – a new long conically-shaped ROMANO, created and maintained by ISPHTA. ISPHTA also maintains varieties of foreign origin – HYFFAE and SHAKIRA (originator Enza Zaden).

Other interesting varieties

Local varieties – new flattened orange GLOBUS ORANJ and conical yellow TOAMNA DE AUR by ISPHTA; conical white LUMINA and flattened RUBINOVÎI by PNIISH (flattened).

Varieties of foreign origin: flattened BIHAR (originator and maintainer NARIC VCRD, Hungary), BUCUR (originator and maintainer SC Patru Agro, Romania), GOGOMAX (originator Monsanto), KABALA (originator Syngenta Seeds B.V., Holland), TRAIAN (originator and maintainer Agrosel, Romania).

Other hot peppers varieties of foreign origin which can be considered for cultivating: extra-hot light-green and red KAMPAI FI, very hot green KS 65 FI, and medium-hot green/red KS6215 FI by Kitano.

Aubergine

The local varieties suitable for cultivation in Căuşeni and Ştefan-Vodă areas, which could be interesting, include the round variety KOROLEVA MARGO and small NISTRU (both by PNIISH).

Other local varieties which have a good non-bitter taste: MEGATRON, VĂRATIC and OPTIMUS. All produced and maintained by PNIISH.

Varieties grown in Moldova which are not included in the catalogue but worth exploring include white ARETUZA F1 and small blue SABELLE by Rijk Zwaan82, small white CLARA F1 by Semencoop and round white-graffitti Italian heirloom ROTONDA BIANCA SFUMATA DI ROSA83, graffiti ANNINA F1 by Enza Zaden, MYRTO and NEREA F1 by Fito Semilas, and RANIA F1 by Semencoop.

Crookneck pumpkin

Niche pumpkins include local varieties of crookneck pumpkin PREZENT (by PNIISH) and CARAT (originator Hortsem SRL, maintainer Diolsem).

Foreign varieties listed in the catalogue include MATILDA (by Enza Zaden) and MUSQUEE DE PROVENCE (by HM Clause).

Asparagus

Asparagus is not included in the catalog, but it has been cultivated in Moldova for about 3 years. There are no large plantations, but many local consumers appreciate this vegetable from local organic and other cultivators. Further research is required regarding the possibilities for asparagus cultivation in Căuşeni and Ştefan-Vodă areas.

Artichoke

Artichokes too are not listed in the catalog, but they are cultivated in Moldova. Varieties to consider include GREEN GLOBE from Agrosem; SYMPHONY, GREEN QUEEN F1 and purple variety ARTEMISA F1 from Nunhems. Further research is required as to its cultivation in Căuşeni and Ştefan-Vodă areas.

Cabbages

The niche and health market has a growing demand for rare varieties of coloured cabbages. There are no such local varieties registered in the catalogue.

Of the foreign varieties not included in the catalogue, the examples of what is worth considering for small-scale elite and niche market production are: violet Chinese cabbage JAMADA F1 by Kitano, violet cauliflower VIOLETTO SICILIA, a heirloom Sicilian variety, Romanesco broccoli VERONICA F1 by De Bolster, green cauliflower VERDE DI MACERATA, a heirloom Italian variety, curly kale LACINIATO NERO DI TASCANA by l'ortolano.

Leafy vegetables

Most leafy vegetables have limited shelf life and require refrigeration throughout the whole delivery chain. This factor needs to be taken into account when planning for cultivation.

Lettuce

There are no local varieties of lettuce listed in the catalogue. The varieties of foreign origin worth considering include FRILLICE by Monsanto – a cross between iceberg lettuce and curly endive, ILEMA by Enza Zaden – dark-green Lollo lettuce with extremely dense well-filled heads, LEA by Enza Zaden – dark red colour, red REVOLUTION by Nunhems.

Not included in the catalogue, but worth considering are rucola, mini rucola, and all kinds of new and coloured lettuce types (such as, for example, LITTLE GEM or any of the Easy leaf varieties by Enza Zaden). Seeds of some varieties can be purchased from the Moldovan seed producer Diolsem.

Spinach

The only variety listed in the catalogue is CLIPPER by Sakata. Shock-freezing is the best way of processing, as it preserves most nutritional properties.

Mustard greens (Brassica juncea)

This drought-resistant crop with health-promoting properties is also a good candidate for cultivation in Căuşeni and Ştefan-Vodă areas. Seeds are available from the local seed producer Diolsem.

Swiss chard (Beta vulgaris subsp. vulgaris)

This drought-resistant beetroot subspecies also has health-promoting properties, and is a good candidate for cultivation in Căuşeni and Ştefan-Vodă areas.

1.5 CEREALS, PULSES, OILSEEDS

Peas and beans

The Public Research Institute for Field Crops "Selection" (Selecta) is the creator and maintainer of the Moldovan pea varieties: GRAŢIANA and NADIA (new), as well as the bean varieties: MIRABELA, and new CLARINA, CRIZANTEMA, GAROFIŢA, MARIŢA and PETRELA varieties.

Green beans

There are no local varieties listed in the catalogue, and the most interesting variety of foreign origin is a premium cranberry bean ETNA (by Monsanto).

Cowpeas (Vigna unguiculata).

This is another niche product that is on the rise in the EU, following the healthy and vegan/vegetarian diet trends. Moldovan varieties worth considering are DINA and INA by IGFPP.

Chickpeas and lentils

Chickpeas and lentils have good export value. IGFPP is a maintainer of the Moldovan varieties of chickpeas BOTNA, ICHEL, OVIDEL and COGÂLNIC (new), as well as lentils – AURIE and VERZUIE.

Maize, sweet corn

In total, over 1 100 varieties, 1 500 inbred lines, and 1 400 of mutants of maize are maintained, and over 2 000 hybrid combinations are tested annually in Porumbeni. The export potential of different Moldovan varieties would require further research.

Coloured varieties of maize grown in Moldova have a niche market export potential and are worth investigating locally.

Five maize PORUMBENI varieties - 310, 360, 390A, 427 and 461 have high quality and productivity, and were certified in the EU market (Romania).

PORUMBEN-461 also showed a record 20 tonnes per ha yield during the very dry Summer of 2015.88.

Sweet corn

Out of 50 varieties listed in the catalogue, 13 are local: early AIVENGO, AURICA and JEMCIUG by PNIISH, early FOCUS 275 SU by Diolsem and early PORUMBENI-198 MRf, PORUMBENI 196 SU (new), PORUMBENI 200 MRf, medium PORUMBENI 252 SU, PORUMBENI 280 MRf, PORUMBENI 340 MRf, PORUMBENI 341 MRf, and late PORUMBENI 342 MRf and PORUMBENI 343 MRf by Porumbeni.

Three varieties are marked as super-sweet: early SHEBA and TROPHY, and late BASIN by Monsanto.



Corn seeds PORUMBENI 461 MRf

Source:https://md.all.biz/en/corn-seeds-porumbeni-461-mrf-fao-460-g389810

Millets

Sorghum (Sorghum bicolour)

Out of 20 varieties of Sorghum listed in the catalogue, only one local variety is produced as cereal for human consumption – PIŞCEVOI 1 (by Porumbeni). Moldovan company Bioem produces not only seeds of several sorghum varieties, but also sorghum flour, semolina, groats and other products.

Millet (Panicum miliaceum L.)

Only one variety of millet is listed in the catalogue – the local variety SOIUZ 1, (by Selecta).

Sunflowers

While most sunflower seeds are sold shelled, there is a niche for high quality large-size white or black with white stripes shelled seeds. Such seeds can fetch a much higher price when sold in small packages raw or fried – for snacks.

There are 212 varieties of sunflowers in the catalogue, including many local varieties. However, the data do not include the size, shape and colour of the seeds, so it needs further research. The white variety is native to Turkey, seed are available online.

1.6 EXOTIC SUPERFOODS AND SUPERFRUITS

Exotic superfoods and superfruits with high export potential and value can provide good competition to such products transported from oversees. Some of them are already cultivated in Moldova, but more species and varieties require further research regarding their adaptiveness to Moldovan climate and potential for commercial cultivation.

Cornelian cherry

This berry is mainly used for making jams and has a history of use in traditional Chinese medicine. The growing interest in the EU is driven by the healthy diet trend.

The catalogue lists four local varieties created by ISPHTA: CORN CU FRUCTE MARI, DE BAIMACLIA, DE BUCOVĂŢ and DE ORHEI. VLADIMIRSKIY, CHISINAU YELLOW, KOSTEN 3, and KRUPNOPLODNI NS varieties showed advantage over other varieties in terms of fruit size and yield. Registered rootstock maintained by ISPHTA: CORN.

Jujuba

The Catalogue lists one local variety CHIŞINĂU 3 and five varieties or Chinese origin – IA-ŢZAO, KITAISKI-60, KITAISKI-93 and TA-IAN-TZAO.

Goji

This is a drought-resistant crop which has a good export potential. There is only one variety in the Catalogue - MIRACOL (originated and maintained by SRL ,Frigodoragro", tel.: +37368227926). As it is marked for cultivation in the Central zone only, more research would be needed to estimate the potențial for Goji cultivation in Căuşeni and Ştefan-Vodă areas.

Okra

Okra is a drough-resistant health-promoting crop. The varieties available in the area include Bulgarian CLEMSON and red BURGUNDI varieties by Florian, as well as a red variety LIASKOVSKA BG by Opal Zi.

Physalis

This superfruit is cultivated in Romania and can be cultivated in Moldova. Its export potential to the EU market needs to be further researched, also using the local cultivation experience. Seeds of different varieties, including organic, are available in the EU.

Amaranth

The prospects of cultivation of Amaranthus hypochondriacus and its use was assessed during the trials conducted at the experimental field of the National Botanical Garden (Institute), Chişinău in 2019. It showed that Amaranth grown in Moldova has good nutritional value and can be exploited in many ways: as pseudo-grain and fodder and as feedstock in the production of renewable energy.

Quinoa

This is another drought-resistant gluten-free crop with high nutritional value and great export value. In 2021 Catalogue it was included as a seed for export, but despite its growing popularity in Moldova, its local cultivation has not started yet.

Kiwano (Cucumis metuliferus)

Kiwano is an exotic fruit variety with health benefits. It is cultivated in Ukraine, and can be considered for cultivation in Moldova.

Scorzonera (Scorzonera hispanica)

Scorzonera (or salsify) is a niche vegetable with health benefits with high export potential. It is cultivated in Ukraine and can also be grown in Moldova.

Safflower (Carthamus tinctorius L.)

There was a successful experiment to grow safflower in Moldova in 2015, but further research is needed in order to evaluate the prospects for its cultivation.97 Seeds are available in Moldova from Smena Traide.

1.7 HERBS AND SPICES

The local varieties of herbs listed in the catalogue produced and maintained by IGFPP:

Clary sage (Salvia sclarea L.) – 6 new varieties AMBRA PLUS, BALSAM, DACIA 99, NATALY CLARY, PARFUM PERFECT AND VICTOR, medicinal use and essential oils.

Common sage (Salvia officinalis L.) – MIRACOL (new), medicinal use, oil.

Fennel (Foeniculum vulgare Mill.) - PEREN-1 (new), medicinal use.

Lavender (Lavandula angustifolia Mill.) – CHIŞINIOVSCAIA 90, and 5 new varieties – ALBA 7, AROMA UNICA, LAVINIE DE GRĂDINĂ, MOLDOVEANCA 4, and VIS MAGIC 10, medicinal use and essential oils.

Moldavian dragonhead (Dracocephalum moldavica L.) – AROMA 1, used for essential oils.

Hyssop (Hyssopus officinalis L.) – SAFIR 1, young leaves used in salads or in cooking to flavour dishes.

Milk thistle (Silybum marianum L.) – ARGINTIU (new), FORTIFICATOR, medicinal use, oil.

Calendula (Calendula officinalis L.) – NATALY (new), medicinal use

Varieties originated and maintained by Porumbeni:

White mustard (Sinapis alba L.) – ALBUMEL, medicinal use, oilCoriander (Coriandrum sativum L.) – DE PAŞCANI, AROMAT (new), medicinal use and essential oils.

Flax (Linum usitatissimum L.) – IN ALBASTRU, medicinal use, oil.

Sesame (Sesamun indicum L.) - DELICIU, medicinal use, oil.

Melissa (Melissa officinalis L.) – LĂMÎIŢĂ (new), medicinal use, oil.

Elecampane (Inula helenium L.) – VIGUROS, medicinal use, oil.

Yellow horn poppy (Glaucium flavum Cr.) - AGAT, medicinal use, oil.

Caraway (Carum Carvi L.) – MOLDCARVI, medicinal use, essential oil and food.

Winter savory (Satureja montana) – ALFA – 14, medicinal use, essential oil and food.

Mint (Mentha L.) – USIGEN, medicinal use, essential oil and food Aniseed (Pimpinella anisum) – AROMA DALBA (new), medicinal use, essential oil and food.

Varieties originated and maintained by the Moldova State University:

Mint (Mentha L.) – Three new species: NISTRU R1, SPERANȚA and VICTORIA, medicinal use and food.

Varieties originated and maintained by GBNI:

Yacón (Polymnia Sonchi Falia Poepp) – SAVOARE (new), medicinal use, oil.

Basil (Ocimum basilicum) – 2 new varieties – CREŢIŞOR and OPAL-MINI, medicinal use, oil and food.

Tomatillo (Physalis ixocarpa Jack. ex. Nees.) – AGAT-GB (new), medicinal use and food.

Not included in the catalogue, but cultivated by farmers in Moldova: Saffron (Crocus Sativus)

Saffron is cultivated in Romania, and a small-scale certified saffron production started in Moldova in 2019, and possibilities for its cultivation in Căuşeni and Ştefan-Vodă areas must be explored. It is a profitable and growing business with high export potential. Seedlings are available in Turkey and Romania.

2. EXPORT OF THE MOLDAVIAN AGRICULTURAL PRODUCTS TO THE EU MARKET

With 52.2% of all commerce, Moldova's largest trading partner is the European Union. The EU-Moldova Deep and Comprehensive Free Trade Area allows virtually all Moldovan goods to enter the EU duty-free (DCFTA). The law allowing Moldova to at least double its duty-free exports of the final seven products to the EU for a year (until July 24, 2023) was adopted by the EU commission in June 2022:

- tomatoes (Taric code [TC] 0702000000, 4000 tonnes);
- garlic (TC 0703200000, 44 t);
- table grapes (TC 0806101000, 5800 t);
- apples (TC 0808108000, 8000 t);
- cherries (TC 0809290000, 300 t);
- plums (TC 0809400500, 4000 t);
- grape juice (TC 2009611000, 2009691900, 2009695100, 2009695900, 100 t).

Due to persistently hot and/or dry weather across much of Europe in 2022, when energy prices were already spiking as a result of Russia's War in Ukraine, the yield outlook for summer crops in the EU was significantly lowered. The grain maize, sunflower, and soybean yield predictions at the EU level are currently well below the five-year average (8–9% decrease). The areas already impacted by a persistent rain deficit are regions of Spain, southern France, central and northern Italy, central Germany, northern Romania, eastern Hungary, Moldova, and western and southern Ukraine, which have the greatest negative effects on the yield potential of summer crops. Table grapes, wheat, maize, and sunflower crops are expected to be particularly impacted as Moldova's agricultural industry is predicted to decrease by 18%.80

⁸⁰ Biodiversity of crops in Moldova and their expiry potential by Alexandra Godina, August 2022

According to the National Bureau of Statistics of the Republic of Moldova81 Exports of the Republic of Moldova in European Union countries (in thousands USD) in 2017-2021 are presented in Table 1.

Notes:

- 1) The information is presented without the data on enterprises and organizations from the left side of river Nistru and municipality Bender.
- 2) Starting in 2013, after Croatia joined the EU, the European Union counts 28 member states.
- 3) Starting in 2020, after the United Kingdom of Great Britain and Northern Ireland left the EU, the European Union counts 27 member states.

CNG		2017	2018	2019	2020	2021
I.	Live animals; animal products	13 483,54	10 964,55	11 353,86	7 299,97	10 560,57
01	Live animals	-	-	1	ı	-
02	Meat and edible meat offal	1,62	0,07	-	24,33	45,44
03	Fish and crustaceans, molluscs and other aquatic invertebrates	0,35	_	-	25,15	34,25
04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	13 477,93	10 940,82	11 235,22	7 135,78	10 336,14
05	Products of animal origin, not elsewhere specified or included	3,63	23,66	118,64	114,71	144,75

Biodiversity of crops in Moldova and their expiry potential by Alexandra Godina, August 2022 https://statistica.gov.md/en/statistic_indicator_details/19#excel_tables_pages

CNG		2017	2018	2019	2020	2021
II.	Vegetable products	421 803,81	421 995,50	359 885,66	293 214,51	358 197,33
06	Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage	291,42	298,73	424,00	108,31	121,07
07	Edible vegetables and certain roots and tubers	3 277,87	3 613,14	3 964,34	1 665,21	2 769,25
08	Edible fruit and nuts; peel of citrus fruit or melons	118 748,42	111 771,15	101 717,58	92 076,98	82 430,14
09	Coffee, tea, maté and spices	1 779,25	2 145,99	1 472,28	946,17	974,55
10	Cereals	119 190,80	141 864,93	99 256,73	45 921,67	115 448,84
11	Products of the milling industry; malt; starches; inulin; wheat gluten	622,09	1 298,15	1 344,86	1 138,49	1 330,54
12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder	177 865,77	160 969,76	151 398,07	151 018,18	154 732,03
13	Lac; gums, resins and vegetable saps and extracts	-	14,08	0,68	5,39	20,55
14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	28,18	19,58	307,13	334,11	370,36
III.	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	47 421,97	58 043,44	66 623,82	84 438,27	106 713,42
15	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	47 421,97	58 043,44	66 623,82	84 438,27	106 713,42
IV.	Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes	166 799,43	143 814,14	154 466,40	177 616,77	173 652,54
16	Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates	1,00	-	-	-	0,23

CNG		2017	2018	2019	2020	2021
17	Sugars and sugar confectionery	25 126,24	14 935,98	7 898,88	7 355,69	14 761,48
18	Cocoa and cocoa preparations	4 659,76	4 921,71	4 517,08	4 762,62	5 300,51
19	Preparations of cereals, flour, starch or milk; pastrycooks' products	11 719,19	12 671,37	12 682,56	14 179,52	15 749,64
20	Preparations of vegetables, fruit, nuts or other parts of plants	56 148,27	32 646,65	52 148,61	61 845,78	46 599,72
21	Miscellaneous edible preparations	1 581,48	1 497,70	885,75	2 077,17	3 352,21
22	Beverages, spirits and vinegar	63 350,02	72 011,84	71 528,20	83 290,60	82 613,04
23	Residues and waste from the food industry; prepared animal fodder	3 291,47	4 334,83	3 795,95	3 385,60	3 843,82
24	Tobacco and manufactured tobacco substitutes	921,99	794,05	1 009,37	719,79	1 431,88

Table 1: Exports of the Republic of Moldova in European Union countries (in thousand USD) in 2017-2021 structured by sections and chapters, according Combined Nomenclature of Goods (CNG)

Data Sources: Custom Service (export and import customs declarations of legal persons)

The main group of products that is being exported to the EU in terms of value in USD remains Vegetable products, however the export diminished by 15,08% in 2021 compared to 2017. The second largest category of products is Prepared foodstuffs; beverages, spirits and vinegar; tobacco and manufactured tobacco substitutes, which increased by 4,1% over the last 5 years. The following section is Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes, with a drastic growth of 125%. Live animals & animal products have the lowest volume of export with only 10 560,57 thousand USD in 2021, while, in comparison, Vegetable products were noted down with 358 197,33 thousand USD in the same year.

The total value of agricultural goods exported from Moldova to the EU is 649 123,86 thousand USD in 2021, in 2020 the recorded number was at 562 569,52 thousand USD and 20 years ago, in 2001, - 62 425,40 thousand USD. There is a growing tendency of Moldova's agricultural products export in the EU market. "The European Union confirms its commitment to further support Moldovan entrepreneurs and remains Moldova's most important economic partner," says a press release by EU Delegation to Moldova.82

3. TARCZYN MUNICIPALITY - BIODIVERSITY OF CROPS

The Tarczyn municipality is becoming more and more beautiful, a friendly place to live, combining the standards of modernity and the cultivation of great traditions. The municipality has great conditions for hippotherapy, equestrianism, cycling and fishing. You can also enjoy delicious specialties of traditional Old Polish cuisine and regional products at local farms.

Other assets of the local area include the beautiful forests of the Chojnowski Landscape Park and the unique ecosystems of the Warsaw Protected Landscape Area. Visitors to the municipality have the opportunity to admire a number of architectural monuments.

About ¾ of the area of the Tarczyn municipality is agricultural land. A significant part of them (more than 20%) is occupied by orchards. More than 88% of the agricultural land is owned by individual farmers. The average area of a farm is about 3.8 hectares.83

The total area of the municipality is 11415 hectares, including agricultural land of 8524 hectares, forests and forest land of 1893 hectares.

100

⁸² https://euneighbourseast.eu/news/latest-news/exports-from-moldova-to-the-eu-rise-by-57-2/

https://bip.tarczyn.pl/public/getFile?id=259871

Individual farms (including communities, allotment gardens and communal land) have 7959 hectares of agricultural land, and 565 hectares of agricultural land belong to other users - state, cooperative, owners not constituting farms up to 1 ha (there are 2174 of them). The main directions of agricultural production are cereal crops more than 50% of crops (rye, wheat, barley, mixtures, oats, triticale), potatoes are about 20% of crops, and more than 5% of crops are vegetable and strawberry crops. Orchards occupy 1682 hectares, i.e. 1/5 of the agricultural area.84



The field of crops - Piaseczno Powiat

Source: https://piaseczno.pl/tarczyn/

With a long-standing horticultural tradition, Tarczyn orchards lead the way in producing the most fruitful crops of fruits in the area. Many connoisseurs savor delicious apples, pears, sour and sweet cherries, strawberries, raspberries, best known for their unique flavor. This is the secret of the local microclimate, clean environment and, above all, the knowledge of the fruit growers, supported by modern production methods. In organic farming, only substances from a special list published and updated by the Institute of Plant Protection can be used.

84http://mapa.siskom.waw.pl/suikzp/piaseczynski/tarczyn/SUiKZP_Tarczyn_TEKST_1999.pdf

Approved for eco production are substances of natural origin - minerals, substances of plant or animal origin, bacteria and viruses or substances produced by them. The examples are copper substances or various forms of sulfur, which also have fungicidal properties. Another used treatment in the farms of Tarczyn municipality is dose of azadirachtin (Indian honeybush seed oil). This is a means of reducing the growth of aphids, which are often a big problem in organic production. To combat the apple fruit fly, the farmers use Isomate CLS pheromone pendants.85 The whole list of substances for plant protection allowed in organic farming in Poland is available at:

https://www.ior.poznan.pl/1631,srodki-ochrony-roslin-do-upraw-ekologicznych

The most common types of substances are: Fungicyd, Insektycyd, Bakteriocyd, Atraktant, Moluskocyd, Akarycyd.



Orchards near Tarczyn and surrounding areas

Source: http://memento.bikestats.pl/p,2.html

https://www.sadnowoczesny.pl/sad/artykuly/porady-dla-sadownikow/kolekcja-odmian-jabloni-i-gruszy-gospodarstwo-huberta-w-rembertowie-2346330

For its continuous dynamic development, for the implementation of numerous infrastructure investments, respect for ecology and care for the development of the residents (in the fields of culture, education, health, sports, communications and security), the Tarczyn Municipality has received a number of awards. It is also among the few local governments in the Mazovian province that met the requirements of the competition and passed the verification procedure, winning the title and certificate of "Fair Play Commune." Moreover, Tarczyn has received such titles as: "Mazovian Commune of the Year". "Friendly Commune", "Friendly to the Environment", "Golden Business Location" or "Active Commune".86



Old fruit trees line, the Tarczynka Mountain

Source:https://wroclaw.wyborcza.pl/wroclaw/7,35771,29064282,stare-gatunki-drzew-owocowych-to-nasz-wielki-skarb.html

Apples

The largest area of apple orchards is located in the so-called "orchard basins" of the Mazowieckie Voivodeship - including the areas around Grojec, Warka and Tarczyn.87

86https://e-uslugi.wrotamazowsza.pl/pl/p/eurzad/samorzady/piaseczynski/tarczyn 87https://www.euractiv.pl/section/rolnictwowpr/news/susza-polska-rolnictwo-sadownictwo-ekologia/

The farms of apples in the Tarczyn Municipality distinguished by a sizable collection of apple varieties such as: Piros, Paulare, Gala, Empire, Mutsu, Golden Delicious, Ligol, Champion, Jester, Idared, Jonagored, Jonica, Decosta, Red Jonaprince, Rajka, Topaz, Red Boskoop, Alwa.88 Jonagold, Ligol, Idared are the winter apple varieties, which after the cold winter in 1986, have the biggest plantations.



Idared apples

Source:https://fajnyogrod.pl/porady/jablon-idared-opis-uprawa-ceny-sadzonek-ciekawostki/

Pears

The most common varieties of pears are Generał Leclerc, Minister Doktor Lucius, Salisbury, Klapsa, Komisówka, Kongresówka, Patten. Konferencja, Lukasówka and Klapsa have the largest share among pear varieties.

Gruszka Minister Doktor Lucius

SOURCE

https://lokalnyrolnik.pl/products/gruszka-dr-lucius-eko_kg_ekojablonka



https://www.sadnowoczesny.pl/sad/artykuly/porady-dla-sadownikow/kolekcja-odmian-jabloni-i-gruszy-gospodarstwo-huberta-w-rembertowie-2346330

3.1 "ZIELONE JABŁUSZKO" ORCHARD FARM IN THE TARCZYN MUNICIPALITY

"Zielone Jabłuszko" is a multi-generational farm, with roots dating back to the early 19th century. Its area is 6.6 hectares. Cultivated here are apple, pear, plum, sweet and sour cherry, and autumn raspberry trees.

This farm, through online channels, organizes so-called "self-harvesting". This means that all those who are interested can come here together with their children or friends to pick ripe fruits with their own hands, straight from the trees or bushes. A stay at the farm is also an excellent opportunity to learn about farm work, fruit cultivation and varieties, as well as their health properties.89

3.2 EKOJABŁONKA - PRESERVE BIODIVERSITY

Hubert Filipiak runs an orchard farm of about 15 hectares. Among the plantings are apple trees, which occupy about 10 hectares, pear trees - 2.5 hectares and cherry trees - also 2.5 hectares. A small area is occupied by plums and cherries. His farm is under the organic farming program, i.e. under the supervision of the certification body, which gives the green leaf mark for organic food. The farm is also controlled by four other institutions: the IJHARS (the Inspection for Commercial Quality of Agricultural and Food Articles), the Agency for Modernization and Restructuring of Agriculture, Sanepid and PIORIN (the State Inspection for Plant Protection and Seed Inspection). All of these entities inspect whether the tenets of organic farming are being applied in the orchard.90

89 https://www.sad24.pl/sady/minister-rolnictwa-reklamuje-samozbiory/90https://lokalnyrolnik.pl/blog/jablka-piekne-czy-smaczne-wizyta-w-sadzie-ekojablonka/

A high level of biodiversity is maintained on Hubert Filipiak's farm. Inter-row mowing is carried out here a maximum of twice a year to promote the development of beneficial predatory insects to help fight pests. Introductions of beneficial organisms are also used here - in addition to predators (e.g., pear borer), a good example is the garden mason, which supports honey bees in pollination.91



Huberta Filipiak's orchard in Remembertow, Tarczyn Municipality
Source:https://www.sadnowoczesny.pl/sad/artykuly/porady-dla-sadownikow/kolekcja-odmian-jabloni-i-gruszy-gospodarstwo-huberta-w-rembertowie-2346330

⁹¹ https://www.sadnowoczesny.pl/sad/artykuly/porady-dla-sadownikow/kolekcja-odmian-jabloni-i-gruszy-gospodarstwo-huberta-w-rembertowie-2346330



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