Enhance the competitiveness of the European chestnuts' farmers and producers through an online platform on Production & Marketing of Organic Chestnuts

EcoChestnut Guidebook on certification of organic chestnuts

June 2022

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Contents

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

1. Introduction

In general

EcoChestnut Guidebook on certification of organic chestnuts corresponds to the needs of all chestnut farmers & producers who need information how to certify their chestnuts as organic or bio-dynamic.

The Guidebook will focus on the current EU regulations in organic production and labelling of organic products and will also provide information on the implementation of the Regulations in the countries of the partnership – France, Portugal, Spain, Bulgaria and Greece.

Since 1 January 2022, **Regulation (EU) 2018/848** of the European Parliament and of the Council of 30 May 2018 is the applicable legislative act, also known as the basic act, laying down the rules on organic production and labelling of organic products, repealing and replacing Council Regulation (EC) No 834/2007 of 28 June 2007. Thus, the main focus on the Guidebook will be to present in short the most important information about the certification of organic foods.

N.B. There is no special requirements or provisions for the chestnuts and chestnut products made in the Regulation (EU) 2018/848. However, as they all are considered "processed agricultural products for use as food", the current Guidebook will present the requirements for certifying the food products i.e. chestnuts & chestnut products as organic.

The Guidebook will also take into account the main aspects of Commission implementing **Regulation (EU) 2020/464** of 26 March 2020 laying down certain rules for the application of Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the documents needed for the retroactive recognition of periods for the purpose of conversion, the production of organic products and information to be provided by Member States. This Regulation should also be taken into account as it says which documents to supply to shorten the conversion period – information that is important for those who are farming chestnuts and/or producing chestnut products in organic way but haven't been certified till now.

In addition, a short reference will be made to Commission Implementing **Regulation (EU) 2021/1165** of 15 July 2021 authorising certain products and substances for use in organic production and establishing their lists

Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control. It is used for lists of products agreed in:

- ANNEX I Active substances contained in plant protection products authorised for use in organic production as referred to in point (a) of Article 24(1) of Regulation (EU) 2018/848;
- ANNEX II Authorised fertilisers, soil conditioners and nutrients referred to in point (b) of Article 24(1) of Regulation (EU) 2018/848;
- ANNEX IV Authorised products for cleaning and disinfection referred to in points (e), (f) and (g) of Article 24(1) of Regulation (EU) 2018/848
- ANNEX V Authorised products and substances for use in the production of processed organic food

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Aims and objectives

As the certification of the organic farming is strictly regulated, it requires significant amount of time and efforts for the farmers to get all the information they need in this regard. Therefore, the EcoChestnut partnership has developed this separate Guidebook for the certification process. It includes only the relevant information and summarizes the main requirements of all relevant EU regulations in the field of organic certification.

The main objective of the Guidebook is to provide the chestnut producers with all the information regarding the certification process – simply described and gathered in one document. So that the chestnut farmers & chestnut products producers can take informative decision whether they will undergo the certification or not. The Guidebook aims to provide the final piece of information that they will need in order to enter the market of organic chestnuts & chestnut products.

Structure of the content

The main section of the Guidebook focuses on the certification processes of the organic foods and outlines the main requirements and what are the keys for success. Also, it provides general information on the economic aspects of the certification.

The second part includes a designated national section with links towards national information regarding lists of products agreed, lists of national organization for certification, etc. These info is available in section 6. of the current document. The English version contains all national content with reference to the partners' country where it is applicable (i.e. all country specific information). The included countries are: France, Spain, Portugal, Bulgaria and Greece.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

2. REGULATION (EU) 2018/848

REGULATION (EU) 2018/848 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007

The European Union (EU) organic farming rules cover agricultural products, including aquaculture and yeast. They encompass every stage of the production process, from seeds to the final processed food. The EU rules on Organic Production (OP), considering the experience gained for the application of Regulation (EC) No 834/2007, identified several points of improvement, in order to correspond to the high expectations of consumers, and to clarify the products concerned by the Regulation. Therefore Regulation (EC) No 834 is repealed and replaced from the 1st of January 2022 by the new Regulation (EC) No 2018/848.

The Regulation 2018/848 aims at the harmonization of rules and at providing a better clarification of organic production to all operators. A new single set of rules applicable to all farmers in and outside the EU replacing the many current different standards will ensure a fair play for all farmers and operators and that all organic food marketed in the EU is of the same, high quality. A simplification of certain production rules could see boost in the organic industry with more and smaller operators being able to access the international market under group certification.

The Regulation 2018/848 main changes are:

- **Introduction of group of operators' certification in the EU** – after 01/2022 group certification of farmers/producers is allowed everywhere within the EU.
- **(Physical) inspection of operators every 2 years under certain conditions** - All operators and groups of operators are subject to a verification of compliance including a physical on-the-spot at least once a year under the new rules except where compliance has been shown by operators for at least three consecutive years or where operators are able to demonstrate a low likelihood of non-compliance. Verification of compliance will occur at every stage of production, preparation and distribution.
- **In third countries (outside EU), transition from the current equivalency recognition to compliance recognition** i.e. compliance recognition for non-EU countries - the principle of equivalence is replaced and organic producers in third countries have to comply with the same rules as those set within the EU. This allows for the assurance that all organic products available in the EU are of the same quality and fairness for producers. Countries which, at the moment, are seen as equivalent with the EU will have to renegotiate the terms of their trade agreement by 31 December 2026 – when this current recognition expires.

Accreditations granted to control bodies for control of Organic Production have also been updated. The harmonization and the transition of accreditation is implemented as follows:

- Transition on national level

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Before the 1st of January 2022, each National Accreditation Body (NAB) should have contacted its National Competent Authority to define the assessments of accreditation performed before updating accreditation certificate and the date to refuse application for the Regulation (EC) No. 834/2007.

- Transition between Equivalency and Compliance approach

If a Certification Body accredited for OP in third countries for the recognition on equivalency (relating to Regulation (EC) No. 1235/2008), it can apply a transfer of its accreditation to be recognised in purpose of compliance. In this case, the NAB shall perform a document review, and at least one on-site assessment before granting accreditation for compliance. Witnessing is not mandatory for transitioning.

Any accreditation granted for the current equivalency approach shall be upheld until the end of the legal transition period of the new regulation.

- Expiration of equivalency recognition

The recognition of equivalency will expire on 31st of December 2023. Specific provisions should be discussed to harmonize practices between NABs during this period.

Subject matter, scope and definitions

The Regulation 2018/848 (the Regulation) establishes the **principles of organic production** and lays down the rules concerning organic production, related certification and the use of indications referring to organic production in labelling and advertising.

The Regulation applies to the following products originating from agriculture, including aquaculture and beekeeping, and to products originating from those products, where such products are, or are intended to be, produced, prepared, labelled, distributed, placed on the market, imported into or exported from the Union:

a) live or unprocessed agricultural products, including seeds and other plant reproductive material;
b) processed agricultural products for use as food;
c) feed.

The Regulation **applies to any operator** involved, at any stage of production, preparation and distribution, in activities relating to such products.

Organic production is an overall system of farm management and food production that combines best environmental and climate action practices, a high level of biodiversity, the preservation of natural resources and the application of high animal welfare standards and high production standards in line with the demand of a growing number of consumers for products produced using natural substances and processes. Organic production thus plays a dual societal role, where, on the one hand, it provides for a specific market responding to consumer demand for organic products and, on the other hand, it delivers

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

publicly available goods that contribute to the protection of the environment and animal welfare, as well as to rural development. For the purposes of the Regulation, the following definitions apply:

1) "**organic production**" means the use, including during the conversion period referred to in Article 10, of production methods that comply with this Regulation at all stages of production, preparation and distribution;
2) "**organic product**" means a product resulting from organic production, other than a product produced during the conversion period referred to in Article 10. The products of hunting or fishing of wild animals are not considered as organic products;
3) "**agricultural raw material**" means an agricultural product that has not been subjected to any operation of preservation or processing.
4) "**operator**" means the natural or legal person responsible for ensuring that this Regulation is complied with at every stage of production, preparation and distribution that are under that person's control;
5) "**farmer**" means a natural or legal person, or a group of natural or legal persons, regardless of the legal status of that group and its members under national law, who exercises an agricultural activity;
6) "**agricultural area**" means agricultural area as defined in point (e) of Article 4(1) of Regulation (EU) No 1307/2013;
7) "**plants**" means plants as defined in point (5) of Article 3 of Regulation (EC) No 1107/2009;EN L 150/18 Official Journal of the European Union 14.6.2018
8) "**plant production**" means production of agricultural crop products including harvesting of wild plant products for commercial purposes;
9) "**plant products**" means plant products as defined in point (6) of Article 3 of Regulation (EC) No 1107/2009;
10) "**ingredient**" means an ingredient as defined in point (f) of Article 2(2) of Regulation (EU) No 1169/2011 or, for products other than food, any substance or product used in the manufacture or preparation of products that is still present in the finished product, even in altered form;
11) "**labelling**" means any words, particulars, trademarks, brand name, pictorial matter or symbol relating to a product that are placed on any packaging, document, notice, label, ring or collar that accompanies or refers to that product;
12) "**advertising**" means any presentation of products to the public, by any means other than a label, that is intended or is likely to influence and shape attitudes, beliefs and behaviours in order to directly or indirectly promote the sale of products.

Principles of organic farming

The **general principles of the organic farming** include among others:

a) contributing to protection of the environment and the climate;
b) maintaining the long-term fertility of soils;

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

c) respect for nature's systems and cycles and the sustainment and enhancement of the state of the soil, the water and the air, of the health of plants and animals, and of the balance between them;
d) the preservation of natural landscape elements, such as natural heritage sites
e) responsible use of energy and natural resources, such as water, soil, organic matter and air;
f) production of a wide variety of high-quality food and other agricultural and aquaculture products that respond to consumers' demand for goods that are produced by the use of processes that do not harm the environment, human health, plant health or animal health and welfare;
g) ensuring the integrity of organic production at all stages of the production, processing and distribution of food and feed;
h) appropriate design and management of biological processes, based on ecological systems and using natural resources which are internal to the management system, etc.

Specific principles applicable to agricultural activities are:

a) maintenance and enhancement of soil life and natural soil fertility, soil stability, soil water retention and soil biodiversity, preventing and combating loss of soil organic matter, soil compaction and soil erosion, and the nourishing of plants primarily through the soil ecosystem;
b) limitation of the use of non-renewable resources and external inputs to a minimum - ban on the use of phytosanitary products and inputs from synthetic chemistry;
c) the recycling of waste and by-products of plant and animal origin;
d) maintenance of plant health by preventive measures, in particular the choice of appropriate species, varieties or heterogeneous material resistant to pests and diseases, appropriate crop rotations, mechanical and physical methods and protection of the natural enemies of pests;
e) use of seeds with a high degree of genetic diversity, disease resistance and longevity;
f) in the choosing of plant varieties, having regard to the particularities of the specific organic production systems, focussing on agronomic performance, disease resistance, adaptation to diverse local soil and climate conditions and respect for the natural crossing barriers;
g) the use of organic plant reproductive material, such as plant reproductive material of organic heterogeneous material and of organic varieties suitable for organic production;
h) production of organic varieties through natural reproductive ability and focusing on containment within natural crossing barriers, etc.

Specific principles applicable to the processing of organic food

The production of processed organic food shall be based, in particular, on the following specific principles:

a) the production of organic food from organic agricultural ingredients;
b) the restriction of the use of food additives, of non-organic ingredients with mainly technological and sensory functions, and of micronutrients and processing aids, so that they are used to a

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

minimum extent and only in cases of essential technological need or for particular nutritional purposes;

c) the exclusion of substances and processing methods that might be misleading as regards the true nature of the product;
d) the processing of organic food with care, preferably through the use of biological, mechanical and physical methods;
e) the exclusion of food containing, or consisting of, engineered nanomaterials.

Production Rules

Only products and substances that have been authorised in the Regulation may be used in organic production, provided that their use in non-organic production has also been authorised in accordance with the relevant provisions of Union law and, where applicable, in accordance with national provisions based on Union law.

The following products and substances referred to in Article 2(3) of Regulation (EC) No 1107/2009 shall be allowed for use in organic production, provided that they are authorised pursuant to Regulation 2018/848:

(a) safeners, synergists and co-formulants as components of plant protection products;

(b) adjuvants that are to be mixed with plant protection products.

The use in organic production of products and substances for purposes other than those covered by this Regulation shall be allowed, provided that their use complies with the principles laid down in Chapter II "Objectives and principles of organic production".

Ionising radiation shall not be used in the treatment of organic food or feed, and in the treatment of raw materials used in organic food or feed.

In the case of perennial crops which require a cultivation period of at least three years, different varieties that cannot be easily differentiated, or the same varieties, may be involved, provided that the production in question is within the context of a conversion plan, and provided that the conversion of the last part of the area related to the production in question to organic production begins as soon as possible and is completed within a maximum of five years. In such cases:

a) the farmer shall notify the competent authority, or, where appropriate, the control authority or the control body, of the start of harvest of each of the products concerned at least 48 hours in advance;
b) upon completion of the harvest, the farmer shall inform the competent authority, or, where appropriate, the control authority or the control body, of the exact quantities harvested from the units concerned and of the measures taken to separate the products;
c) the conversion plan and the measures to be taken to ensure the effective and clear separation shall be confirmed each year by the competent authority, or, where appropriate, by the control authority or the control body, after the start of the conversion plan.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Where not all production units of a holding are managed under organic production rules, the operators shall:

a) keep the products used for the organic and in-conversion production units separate from those used for the non- organic production units;
b) keep the products produced by the organic, in-conversion and non-organic production units separate from each other;
c) keep adequate records to show the effective separation of the production units and of the products.

Conversion

The conversion period shall start at the earliest when the farmer or the operator notified the activity to the competent authorities, in accordance with Article 34(1), in the Member State in which the activity is carried out and in which that farmer or operator's holding is subject to the control system. Products produced during the conversion period shall not be marketed as organic products or as in-conversion products.

No previous period may be retroactively recognised as being part of the conversion period, except where:

a) the operator's land parcels were subject to measures which were defined in a programme implemented pursuant to Regulation (EU) No 1305/2013 for the purpose of ensuring that no products or substances other than those authorised for use in organic production have been used on those land parcels; or
b) the operator can provide proof that the land parcels were natural or agricultural areas that, for a period of at least three years, have not been treated with products or substances that are not authorised for use in organic production.

Products produced during the conversion period shall not be marketed as organic products or as in-conversion products. However, the following products produced during the conversion period may be marketed as in-conversion products: food products of plant origin and feed products of plant origin, provided that the product contains only one agricultural crop ingredient, and provided that a conversion period of at least 12 months before the harvest has been complied with.

GMO usage

GMOs, products produced from GMOs, and products produced by GMOs shall not be used in food or feed, or as food, feed, processing aids, plant protection products, fertilisers, soil conditioners, plant reproductive material, micro- organisms or animals in organic production.

Operators may assume that no GMOs and no products produced from GMOs have been used in the manufacture of purchased food where such products do not have a label affixed or provided, or are not accompanied by a document indicating GMO content. For that purpose, operators using non-organic products purchased from third parties shall require the vendor to confirm that those products are not produced from GMOs or produced by GMOs.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Plant production rules (Annex II, part I of the Regulation)

Organic crops, like chestnut groves, shall be produced in living soil, or in living soil mixed or fertilised with materials and products allowed in organic production, in connection with the subsoil and bedrock. All plant production techniques used shall prevent or minimise any contribution to the contamination of the environment.

For chestnuts and chestnut goves to be considered as organic products, the production rules laid down in the Regulation should be applied with respect to the parcels during a conversion period of **at least two years before harvesting the chestnuts.** In the case of treatment with a product or a substance not authorised for use in organic production, the competent authority shall require a new conversion period.

Reproductive material

For the production of chestnut groves, only organic chestnuts' reproductive material shall be used. To obtain organic plant reproductive material (chestnut twig) to be used for the production of products other than plant reproductive material, the mother plant and, where relevant, other plants intended for plant reproductive material production shall have been produced in accordance with this Regulation for at least one generation, or, in the case of perennial crops like chestnut groves for at least one generation during two growing seasons.

In organic plant production, tillage and cultivation practices shall be used that maintain or increase soil organic matter, enhance soil stability and soil biodiversity, and prevent soil compaction and soil erosion.

Soil management

Where the nutritional needs of plants cannot be met by tillage and cultivation practices, only fertilisers and soil conditioners that have been authorised pursuant to **Article 24** (Authorisation of products and substances for use in organic production) for use in organic production shall be used, and only to the extent necessary. Operators shall keep records of the use of those products. Preparations of micro-organisms may be used to improve the overall condition of the soil or to improve the availability of nutrients in the soil or in the crops.

For compost activation, appropriate plant-based preparations and preparations of micro-organisms may be used. Mineral nitrogen fertilisers shall not be used. Biodynamic preparations may be used.

Pest and weed management

The prevention of damage caused by pests and weeds shall rely primarily on the protection by natural enemies, the choice of species, varieties and heterogeneous material, cultivation techniques such as biofumigation, mechanical and physical methods, and thermal processes such as solarisation and, in the case of protected crops, shallow steam treatment of the soil (to a maximum depth of 10 cm).

Where plants cannot adequately be protected from pests by measures above or in the case of an established threat to a crop, only products and substances authorised pursuant to **Articles 9 and 24** for use in organic production shall be used, and only to the extent necessary. Operators shall keep records proving the need for the use of such products.

Operators shall keep records regarding the parcels concerned and the amount of the harvest.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Collection, packaging, transport and storage of products

Operators may carry out the simultaneous collection of organic, in-conversion and non-organic products only where appropriate measures have been taken to prevent any possible mixture or exchange between organic, in-conversion and non-organic products and to ensure the identification of the organic and in-conversion products. The operator shall keep the information relating to collection days, hours, the circuit and date and time of the reception of the products available to the control authority or control body.

Operators shall ensure that organic and in-conversion products are transported to other operators or units, including wholesalers and retailers, only in appropriate packaging, containers or vehicles closed in such a manner that substitution of the content cannot be achieved without manipulation or damage of the seal and provided with a label stating, without prejudice to any other indications required by Union law:

a) the name and address of the operator and, where different, of the owner or seller of the product;
b) the name of the product or a description of the compound feedstuff accompanied by a reference to organic production;
c) the name or the code number of the control authority or control body to which the operator is subject; and
d) where relevant, the lot identification mark in accordance with a marking system either approved at national level or agreed with the control authority or control body and which permits the linking of the lot with the records referred to in Article 34(5).

The information referred to in points (a) to (d) may also be presented on an accompanying document, if such a document can be undeniably linked with the packaging, container or vehicular transport of the product. This accompanying document shall include information on the supplier or the transporter.

Areas for the storage of products shall be managed in such a way as to ensure identification of lots and to avoid any mixing or contamination with products or substances not in compliance with the organic production rules. Organic and in-conversion products shall be clearly identifiable at all times.

No input products or substances other than those authorised pursuant to Articles 9 (General production rules) and 24 (Authorisation of products and substances for use in organic production) for use in organic production shall be stored in organic or in-conversion plant and livestock production units.

Where operators handle organic, or in-conversion or non-organic products in any combination and the organic or in-conversion products are stored in storage facilities in which also other agricultural products or foodstuffs are stored:

a) the organic or in-conversion products shall be kept separate from the other agricultural products or foodstuffs;
b) every measure shall be taken to ensure identification of consignments and to avoid mixtures or exchanges between organic, in-conversion and non-organic products;

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

c) suitable cleaning measures, the effectiveness of which has been checked, shall have been carried out before the storage of organic or in-conversion products and the operators shall keep records of those operations.

Only the products for cleaning and disinfection authorised pursuant to Article 24 for use in organic production shall be used in storage facilities for that purpose.

Labelling

For the purposes of this Regulation, a product shall be regarded as bearing terms referring to organic production where, in the labelling, advertising material or commercial documents, such a product or the ingredients used for its production are described in terms suggesting to the purchaser that the product or ingredients have been produced in accordance with this Regulation. In particular, the terms such as 'bio' and 'eco', whether alone or in combination, may be used for the labelling and advertising of products which comply with this Regulation.

Products that have been produced during the conversion period shall not be labelled or advertised as organic products or as in-conversion products.

The label of the organic products should include:

1) the code number of the control authority or control body to which the operator that carried out the last production or preparation operation is subject
2) in the case of prepacked food (like chestnut derivative products), the organic production logo of the European Union.

Where the organic production logo of the European Union is used, an indication of the place where the agricultural raw materials of which the product is composed have been farmed shall appear in the same visual field as the logo and shall take one of the following forms, as appropriate:

a) "EU Agriculture", where the agricultural raw material has been farmed in the Union;
b) "non-EU Agriculture", where the agricultural raw material has been farmed in third countries;
c) "EU/non-EU Agriculture", where a part of the agricultural raw materials has been farmed in the Union and a part of it has been farmed in a third country.

These indication shall be marked in a conspicuous place in such a way as to be easily visible, and shall be clearly legible and indelible. The words 'EU' or 'non-EU' shall not appear in a colour, size and style of lettering that is more prominent than the name of the product.

Organic production logo of the European Union

The organic production logo of the European Union may be used in the labelling, presentation and advertising of products which comply with the Regulation.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

National logos and private logos may also be used in the labelling, presentation and advertising of products which comply with this Regulation.

The logo includes the mandatory indication of the code of the country where the product is produced, the code number of the certification body, as well as the origin of the agricultural product (or its ingredients if the product is multicomponent) - whether it is from the EU, non-EU or ingredients produced inside and outside the EU, as is very often the case for multi-component products.

The organic production logo of the European Union shall follow the model set out in Annex V, and shall comply with the rules set out in that Annex.

The organic production logo of the European Union shall comply with the model below:

- in colour: the reference colour in Pantone is Green Pantone No 376 and Green (50 % Cyan + 100 % Yellow), when a four- colour process is used.
- in black and white only where it is not practicable to apply it in colour

The organic production logo of the European Union shall have a height of at least 9 mm and a width of at least 13,5 mm; the proportion ratio height/width shall always be 1:1,5. Exceptionally, the minimum size may be reduced to a height of 6 mm for very small packages.

Certification

The Certification system is defined in article 34 of the Regulation.

Prior to placing any products on the market as ‘organic’ or as ‘in-conversion’ or prior to the conversion period, operators and groups of operators which produce, prepare, distribute or store organic or in-conversion products, which import such products from a third country or export such products to a third country, or which place such products on the market, shall notify their activity to the competent authorities of the Member State in which it is carried out and in which their undertaking is subject to the control system.

Operators that sell prepacked organic products directly to the final consumer or user shall be exempted from the notification obligation referred to in paragraph 1 of this Article and from the obligation to be in the possession of a certificate referred to in Article 35(2) provided that they do not produce, prepare, store other than in connection with the point of sale, or import such products from a third country, or subcontract such activities to another operator.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Where operators have subcontracted any of their activities to third parties, both the operators and the third parties to whom those activities have been subcontracted shall comply with the above paragraph. Unless the operator has declared in the notification that it remains responsible as regards organic production and that it has not transferred that responsibility to the subcontractor. In such cases, the competent authority shall verify that the subcontracted activities comply with this Regulation, in the context of the control it carries out on the operators or groups of operators that have subcontracted their activities.

Products shall be classified in accordance with the following categories:

a) unprocessed plants and plant products, including seeds and other plant reproductive material;
b) livestock and unprocessed livestock products;
c) algae and unprocessed aquaculture products;
d) processed agricultural products, including aquaculture products, for use as food;
e) feed;
f) wine;
g) other products listed in Annex I to this Regulation or not covered by the previous categories.

Member States may exempt from the obligation to be in the possession of a certificate operators that sell unpacked organic products other than feed directly to the final consumer, provided that those operators do not produce, prepare, store other than in connection with the point of sale, or import such products from a third country, or subcontract such activities to a third party, and provided that:

a) such sales do not exceed 5 000 kg per year;
b) such sales do not represent an annual turnover in relation to unpacked organic products exceeding EUR 20 000; or
c) the potential certification cost of the operator exceeds 2 % of the total turnover on unpacked organic products sold by that operator.

Official controls for the verification of compliance with this Regulation shall be performed throughout the entire process at all stages of production, preparation and distribution on the basis of the likelihood of non-compliance which shall be determined taking into account the following elements:

- the type, size and structure of the operators and groups of operators;
- the length of time during which operators and groups of operators have been involved in organic production, preparation and distribution;
- the results of the controls performed in accordance with this Article;
- the point in time relevant for the activities carried out;
- the product categories;
- the type, quantity and value of products and their development over time;
- the possibility of commingling of products or contamination with non-authorised products or substances;
- the application of derogations or exceptions to the rules by operators and groups of operators;
- the critical points for non-compliance and the likelihood of non-compliance at every stage of production, preparation and distribution;

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- subcontracting activities.

In any case, all operators and groups of operators shall be subject to a verification of compliance at least once a year. The verification of compliance shall include a physical on-the-spot inspection, except where the following conditions have been satisfied:

a) the previous controls of the operator or group of operators concerned have not revealed any non-compliance affecting the integrity of organic or in-conversion products during at least three consecutive years; and
b) the operator or group of operators concerned has been assessed on the basis of the elements referred to in paragraph 2 of this Article as presenting a low likelihood of non- compliance.

In this case, the period between two physical on-the-spot inspections shall not exceed 24 months.

Official controls performed for the verification of compliance with this Regulation shall:

- be performed in accordance with Article 9(4) of Regulation (EU) 2017/625 while ensuring that a minimum percentage of all official controls of operators are carried out without prior notice;
- ensure that a minimum percentage of additional controls are carried out;
- be carried out by taking a minimum number of the samples that have been taken in accordance with point (h) of Article 14 of Regulation (EU) 2017/625;
- ensure that a minimum number of operators that are members of a group of operators are controlled in connection with the verification of compliance.

The delivery or renewal of the certificate shall be based on the results of the verification of compliance.

The written record to be drawn up regarding each official control that has been performed to verify compliance with this Regulation shall be countersigned by the operator or groups of operators as confirmation of their receipt of that written record.

In addition to the obligations laid down in Article 15 of Regulation (EU) 2017/625, operators and groups of operators shall:

a) keep records to demonstrate their compliance with this Regulation;
b) make all declarations and other communications that are necessary for official controls;
c) take relevant practical measures to ensure compliance with this Regulation;
d) provide, in form of a declaration to be signed and updated as necessary:
    1. the full description of the organic or in-conversion production unit and of the activities to be performed in accordance with this Regulation;
    2. the relevant practical measures to be taken to ensure compliance with this Regulation

Certificate

Competent authorities shall provide a certificate to any operator that has notified its activity in accordance with Article 34 and complies with this Regulation. The certificate shall:

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- be issued in electronic form wherever possible;
- allow at least the identification of the operator including the list of the members (if such), the category of products covered by the certificate and its period of validity;
- certify that the notified activity complies with this Regulation; and
- be issued in accordance with the model set out in Annex VI.

The operator shall not place products on the market as organic products or in-conversion products unless they are already in possession of a certificate.

Members of a group of operators shall not be entitled to obtain an individual certificate for any of the activities covered by the certification of the group of operators to which they belong.

Operators shall verify the certificates of those operators that are their suppliers.

Member States may exempt from the obligation to be in the possession of a certificate provided that those operators do not produce, prepare, store other than in connection with the point of sale, or import such products from a third country, or subcontract such activities to a third party, and provided that:

- such sales do not exceed 5 000 kg per year;
- such sales do not represent an annual turnover in relation to unpacked organic products exceeding EUR 20 000; or
- the potential certification cost of the operator exceeds 2 % of the total turnover on unpacked organic products sold by that operator.

ANNEX VI of the Regulation

MODEL OF CERTIFICATE

Certificate pursuant to Article 35(1) of Regulation (EU) 2018/848 on organic production and labelling of organic products

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

1. Document number:	
2. (tick one box as appropriate) ☐ Operator ☐ Group of operators – see annex	3. Name and address of operator or group of operators:
4. Activit(y)(ies) of the operator or group of operators (choose as appropriate): ☐ Agricultural production ☐ Preparation ☐ Distribution ☐ Storing ☐ Import ☐ Export ☐ Placing on the market	5. Name, address and code number of control authority or control body of the operator or group of operators:
6. Categor(y)(ies) of products as referred to in Article 35(7) of Regulation (EU) 2018/848 and production methods (choose as appropriate):	
— unprocessed plants and plant products, including seeds and other plant reproductive material Production method: ☐ organic production excluding during the conversion period ☐ production during the conversion period ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....
— livestock and unprocessed livestock products Production method: ☐ organic production excluding during the conversion period ☐ production during the conversion period ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....
— algae and unprocessed aquaculture products Production method: ☐ organic production excluding during the conversion period ☐ production during the conversion period ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....

This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

— processed agricultural products, including aquaculture products, for use as food Production method: ☐ production of organic products ☐ production of in-conversion products ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....
— feed Production method: ☐ production of organic products ☐ production of in-conversion products ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....
— wine Production method: ☐ production of organic products ☐ production of in-conversion products ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....
— other products listed in Annex I to Regulation (EU) 2018/848 or not covered by previous categories (please specify): Production method: ☐ production of organic products ☐ production of in-conversion products ☐ organic production with non-organic production (pursuant to Article 9(7) of Regulation (EU) 2018/848 or in the case of preparation, distribution, storing, import, export, placing on the market)	Certificate validity period from ..... to .....
This document has been issued in accordance with Regulation (EU) 2018/848 to certify that the operator or group of operators (choose as appropriate) meets the requirements of that Regulation.	
Date, place: Signature on behalf of the issuing control authority or control body:	

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0848&from=EN

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

3. REGULATION (EU) 2020/464

COMMISSION IMPLEMENTING REGULATION (EU) 2020/464 of 26 March 2020 laying down certain rules for the application of Regulation (EU) 2018/848 of the European Parliament and of the Council as regards the documents needed for the retroactive recognition of periods for the purpose of conversion, the production of organic products and information to be provided by Member States

The main content of the Regulation refers to:

- documents to be supplied in case of retroactive recognition of previous periods for the conversion to organic production;
- production rules on livestock and aquaculture animals, processed food and feed with related transitional provisions;
- information to be transmitted by EU countries concerning the availability on the market of organic and in-conversion plant reproductive material, organic animals and organic aquaculture juveniles.

Conversion: Documents to be supplied for the purpose of the retroactive recognition of a previous period

According to **Article 10 of the Regulation (EU) 2018/848** - No previous period may be retroactively recognised as being part of the conversion period, except where:

a) the operator's land parcels were subject to measures which were defined in a programme implemented pursuant to Regulation (EU) No 1305/2013 for the purpose of ensuring that no products or substances other than those authorised for use in organic production have been used on those land parcels; or

b) the operator can provide proof that the land parcels were natural or agricultural areas that, for a period of at least three years, have not been treated with products or substances that are not authorised for use in organic production.

For sub-point (a) - the operator shall submit to the competent authorities the official documents from the relevant competent authorities proving that the land parcels for which the retroactive recognition of a previous period is requested were subject to measures which were defined in a programme implemented pursuant to Regulation (EU) No 1305/2013 and that no products or substances other than those authorised for use in organic production have been used on those land parcels.

For sub-point (b) - the operator shall submit to the competent authorities the following documents proving that the land parcels were natural or agricultural areas that, for a period of at least three years, have not been treated with products or substances that are not authorised for use in organic production in accordance with Regulation (EU) 2018/848:

- maps identifying clearly each land parcel covered by the request for retroactive recognition and information on the total surface of those land parcels

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

- detailed risk analysis carried out by the control authority assess whether any land parcel covered by the request has been treated with products or substances that are not authorised for use in organic production for a period of at least three years,
- laboratory analyses results from accredited laboratories on soil and/or plant samples taken by the control authority or control body from each land parcel identified as presenting the risk of being contaminated as a result of being treated with products and substances that are not authorised for use in organic production following the detailed risk analysis referred above;
- inspection report from the control authority or control body following a physical inspection of the operator for the purpose of verifying the consistency of the information collected on the land parcels covered by the request;
- any other relevant documents deemed necessary by the control authority;
- final written statement of the control authority or control body indicating whether a retroactive recognition of a previous period as being part of the conversion period is justified and indicating the starting period considered as organic for each land parcel concerned as well as the total surface of the land parcels benefiting from a retroactive recognition of a period.

Techniques authorised in the processing of food products

Only techniques complying with the principles laid down in Chapter II of Regulation (EU) 2018/848, in particular the relevant specific principles applicable to the processing of organic food laid down in Article 7, with the relevant rules of Chapter III of that Regulation and with the detailed production rules set out in Part IV of Annex II thereto are authorised in the processing of food products in organic production.

Ion exchange and adsorption resin techniques are authorised when used for the preparation of organic raw materials.

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0464&from=EN

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

4. REGULATION (EU) No 2021/1165

Commission Implementing Regulation (EU) 2021/1165 of 15 July 2021 authorising certain products and substances for use in organic production and establishing their lists (Text with EEA relevance)

Main content:

- conditions for the authorisation of substances and products for use in organic production;
- procedure to grant specific authorisation for the use of products and substances in certain areas of third countries;
- transitional measures for cleaning and disinfection of products and non-organic agricultural ingredients listed in relevant Annexes of Regulation (EC) No 889/2008;
- transition period up to 31 December 2022 for the validity of documentary evidence under Article 68 of Regulation (EC) No 889/2008.

Active substances in plant protection products

For the purposes of point (a) of Article 24(1) of Regulation (EU) 2018/848, only the active substances listed in Annex I to this Regulation may be contained in plant protection products used in organic production as set out in that Annex, provided that those plant protection products:

(a) have been authorised pursuant to Regulation (EC) No 1107/2009 of the European Parliament and of the Council;

(b) are used in accordance with the conditions for use as specified in the authorisations of the products containing them, granted by the Member States; and

(c) are used in compliance with the conditions set out in the Annex to Commission Implementing Regulation (EU) No 540/2011.

Full list of the eligible active substances in plant protection products is presented in ANNEX I Active substances contained in plant protection products authorised for use in organic production as referred to in point (a) of Article 24(1) of Regulation (EU) 2018/848.

Fertilisers, soil conditioners and nutrients

For the purposes of point (b) of Article 24(1) of Regulation (EU) 2018/848, only the products and substances listed in Annex II to this Regulation may be used in organic production as fertilisers, soil conditioners and nutrients for plant nutrition, litter improvement and enrichment or algae cultivation or husbandry environment of aquaculture animals provided that they are compliant with the relevant provisions of Union law, in particular with Regulation (EC) No 2003/2003 of the European Parliament and of the Council, the relevant applicable Articles of Regulation (EU) 2019/1009 of the European Parliament and of the Council, Regulation (EC) No 1069/2009 of the European Parliament and of the Council and

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Commission Regulation (EU) No 142/2011 and, where applicable, in accordance with national provisions based on Union law.

Full list of the eligible fertilisers, soil conditioners and nutrients is presented in ANNEX II Authorised fertilisers, soil conditioners and nutrients referred to in point (b) of Article 24(1) of Regulation (EU) 2018/848.

Products for cleaning and disinfection

For the purposes of point (f) of Article 24(1) of Regulation (EU) 2018/848, only the products listed in Part B of Annex IV to this Regulation may be used for the cleaning and disinfection of buildings and installations used for plant production, including for storage on an agricultural holding, provided that those products comply with the provisions of Union law, in particular Regulation (EC) No 648/2004 and Regulation (EU) No 528/2012 and, where applicable, in accordance with national provisions based on Union law.

For the purposes of point (g) of Article 24(1) of Regulation (EU) 2018/848, only the products listed in Part C of Annex IV to this Regulation may be used for cleaning and disinfection in processing and storage facilities, provided that those products comply with the provisions of Union law, in particular Regulation (EC) No 648/2004 and Regulation (EU) No 528/2012 and, where applicable, in accordance with national provisions based on Union law.

Pending their inclusion in Part A, B or C of Annex IV to this Regulation, products for cleaning and disinfection referred to in points (e), (f) and (g) of Article 24(1) of Regulation (EU) 2018/848 that were authorised for use in organic production under Regulation (EC) No 834/2007 or under national law prior to the date of application of Regulation (EU) 2018/848 may continue to be used if they comply with the relevant provisions of Union law, in particular Regulation (EC) No 648/2004 and Regulation (EU) No 528/2012 and, where applicable, in accordance with national provisions based on Union law.

Full list of the eligible products for cleaning and disinfection is provided in ANNEX IV Authorised products for cleaning and disinfection referred to in points (e), (f) and (g) of Article 24(1) of Regulation (EU) 2018/848.

Food additives and processing aids

For the purposes of point (a) of Article 24(2) of Regulation (EU) 2018/848, only the products and substances listed in Part A of Annex V to this Regulation may be used as food additives, including food enzymes to be used as food additives, and processing aids in the production of processed organic food, provided that their use is in accordance with the relevant provisions of Union law, in particular Regulation (EC) No 1333/2008 of the European Parliament and of the Council and, where applicable, in accordance with national provisions based on Union law.

Full list of the eligible food additives and processing aids is provided in ANNEX V Authorised products and substances for use in the production of processed organic food.

Source: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1165&from=EN

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

5. Description of the conversion & certification process

How to switch from conventional to organic farming?

The process of transition from conventional to organic farming takes several years. It involves three parties - a manufacturer, a control body/controller and a certification body. In the next few lines you can get acquainted with the steps that are included in the transition process:

Step one: Selection of a control body and setting deadlines.

The respective farmer chooses a control body. Then there is a contact and exchange of information incl. price negotiation, location and what the respective farmer wants to do, etc.

Upon reaching an agreement, both parties enter into a contract, payment is made and the farmer enters a conversion period. During the conversion period, the products can't be sold as organic products. However, only the following products produced during the conversion period may be marketed as in-conversion products:

a) plant reproductive material, provided that a conversion period of at least 12 months has been complied with;
b) food products of plant origin and feed products of plant origin, provided that the product contains only one agricultural crop ingredient, and provided that a conversion period of at least 12 months before the harvest has been complied with.

The duration of the conversion period depends on the respective crops. According to Regulation (EU) 2018/848 a conversion period is at least two years before sowing; in the case of grassland or perennial forage - at least two years before its use as organic feed; in the case of perennial crops other than forage - at least three years before the first harvest of organic products.

During the conversion period, inspections shall be carried out at least once a year. Samples may also be taken from the soil or plant material after consent between the farmer and the controller. The aim is to monitor the flows of incoming and outgoing raw materials and the products obtained from the farm.

Step two: Separate control and certification

The control of the production is carried out by persons/organisations, registered in the Ministry of Agriculture and Food. They can be local & international organisation. However, in order to be able to perform their role, they must be authorized by the Ministry, enlisted in the registry and have a contract with a laboratory.

The people who exercise control do not engage in certification so that there is no influence.

At this stage, an inspection report is completed. It is prepared by an on-site inspector who checks the actual condition of the farm and the kept records. This is done to track the flows of incoming and outgoing raw materials and the products obtained from the farm.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

The biological fields should be separated from the conventional ones with buffer zones. During production and storage an appropriate marking is placed in order to divide biological from conventional products.

The product flow is calculated and described - from the harvest to the sold products. Upon detection of discrepancies, the inspector shall prescribe corrective actions and deadlines for their elimination.

Step three: Issuance of a certificate.

After checking the documentation and the actual condition in the farm, including the premises, warehouses and fields, an inspection report is filled in, which is signed by both parties. At the same time, the certification manager prepares a reasoned proposal to the relevant issuing authority.

The certificate shall contain the document number, the name and address of the farmer, the name, address and code number of the inspection body, the type of production - plant, livestock or processing and the standard the received document refers to. The certificate has a period of validity, which is precisely mentioned.

Price of certification

"Everything is organic in my farm, but it's not certified because it's very expensive," is a line you can hear very often from different farmers/producers. Don't believe that. Organic products have a higher price not because of the amount paid for certification (which usually is less than one average monthly salary for 1-year-certification), but because of the lower yields in this method of cultivation.

However, certification costs appear to be rather different from country to country and also vary upon certifying companies, certified products etc. Thus, the best option to know the price for your particular farm & production premises is to contact a certification company and request an offer made specifically for you.

Just another benefit of the organic certification

In addition to the well-known benefits from the production of organic products - both for the people and nature, their control and guarantees of compliance are much higher.

When there is the slightest doubt as to the biological origin of a raw material or product, it shall be withdrawn immediately from the market and, depending on the extent of the infringement, shall either be destroyed or marketed as conventional.

There is an extremely reliable system of communication between the various bodies in the chain to support of higher consumer confidence in organic products.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

6. List of national control bodies

France

To market products from organic farming, any operator (whether producer, preparer, distributor or importer) must have been checked by a certification body approved by the National Institute of Origin and Quality (INAO) and have the corresponding certificates.

The list of certification bodies approved is available at the following link:

https://www.agencebio.org/profil/pages-communes/les-organismes-certificateurs-en-france/

Cost of certification

The price of the 1st certification audit is between €450 and €1000, depending on the size of the farm and the nature of the activities to be certified.

The price of the inspection between €300 and €800, depending on the size of the farm and the nature of the activities to be certified. It is paid on a yearly basis.

Spain

In Spain, organic farming guidelines are carried out by public entities allocated in each Autonomous Region of the state, for example:

- Regulatory Counsel of Ecological Agriculture of Galicia (CRAEGA): https://www.craega.es/es/
- Ecological Agriculture Committee of Valencian Comunityc (CAECV): https://www.craega.es/es/

These public organisms are also grouped under the public society INTERECO (https://interecoweb.com/).

Certification may be carried out both by these organisms and private entities, which will consider that all inputs and methods involved in the agricultural production are certified as organic at both European and/or national and regional levels.

SOCISHERT (https://sohiscert.com/) or CAAE (https://www.caae.es/) are examples of such private entities, which are authorized by the Ministry of Agriculture, Fishery and Food (https://www.mapa.gob.es/es/alimentacion/temas/produccion-eco/default.aspx) to provide organic farming certifications for marketing in the EU and outside of it.

Demeter (https://www.demeter.es/) is the only entity that provides a private certification regarding biodynamic production, by which producers may add the label Biodinamica® to their marketed products.

Cost of certification

Financial costs vary among regional public entities, as well as among private entities. Furthermore, different quotes are applied to each producer according to its crop producing surface and company size; the costs increasing according to this.

For example, CRAEGA may charge a minimum of 382€ (https://www.craega.es/wp-content/uploads/2019/07/2019-07-29-nuevo-anexo-de-taxas-2019.pdf), while CAECV charges a

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

minimum of 423€ (https://www.caecv.com/wp-content/uploads/2022/04/2022.04.07_Guia-de-cuotas-2022_aprobacion-y-adecuacion_02POG22.pdf).

Additional costs are derived from inscriptions, audits, and controls. In some Autonomous Regions, special considerations are also given to specific products and/or processes associated. Private certification entities do not disclose their quotes publicly.

Certificate pricing also varies depending on the Autonomous Region the farming takes place in. As an example, CAECV in the autonomous Region of Valencia may charge a minimum of 177.10€, which is the same price for a first certificate, whereas CRAEGA in Galicia charges a minimum of 90€ (See https://www.caecv.com/wp-content/uploads/2022/04/2022.04.07_Guia-de-cuotas-2022_aprobacion-y-adecuacion_02POG22.pdf and https://www.craega.es/wp-content/uploads/2019/07/2019-07-29-nuevo-anexo-de-taxas-2019.pdf). Private certification entities do not disclose their quotes publicly.

Re-certification quotes are also variable among regions in Spain. Considering CAECV in Valencia, the re-certification costs are a minimum of 177.10€ (same cost of first-time certification), whereas, CRAEGA in Galicia charges 70€ (See https://www.caecv.com/wp-content/uploads/2022/04/2022.04.07_Guia-de-cuotas-2022_aprobacion-y-adecuacion_02POG22.pdf and https://www.craega.es/wp-content/uploads/2019/07/2019-07-29-nuevo-anexo-de-taxas-2019.pdf). Private certification entities do not disclose their quotes publicly.

Portugal

In Portugal, OCs – Control and Certification Bodies (Original Portuguese designation: Organismos de controlo e certificação) are private bodies recognized by DGADR (Direção Geral de Agricultura e Desenvolvimento Rural – General Board of Agriculture and Rural Development), and accredited by IPAC (Instituto Português de Acreditação – Portuguese Institution of Accreditation), performing their activities of conformity control of agricultural products in the Production Methods (Biological, Integrated Production), Certification of Traditional Products (DOP, IGP, ETG), Greening environmental certification system, GLOBALG.A.P., among others.

OCs perform field control visits at least once a year per each operator, following up with an annual risk evaluation, based on a set of predefined criteria, to which supplementary visits and sample recovery can be added according to the results of analysis and risks associated with each operator.

Certification is a control system, with specific European regulation and a Portuguese norm, that supervise the practices of the stakeholders in the making, transformation, distribution, storage, import and export of products.

According to IPAC, the bodies credited for agriculture, forest and fishing products are:

AGRICERT	https://agricert.pt/
APCER, Associação Portuguesa de Certificação	https://apcergroup.com/pt/
CERTIPLANET – Certificação da Agricultura, Florestas, Unipessoal, Lda	www.certiplanet.pt
CERTIS – Controlo e Certificação, Lda	https://certis.pt/
CODIMAGO – Certificação e Qualidade, Lda	http://www.codimaco.pt/

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

ECOCERT PORTUGAL, Unipessoal, Lda	www.ecocert.pt
Kiwa Sativa – Unipessoal, Lda.	www.sativa.pt
NATURALFA – Controlo e Certificação	https://naturalfa.pt/
SGS ICS - Serviços Internacionais de Certificação, Lda	www.sgs.pt
TRADIÇÃO E QUALIDADE.	https://www.tradicao-qualidade.pt/

Cost of certification

There isn't a set cost established for the certification of a biological product.

The certification service of a biological product has a cost that depends on the complexity and size of the company (exploration size, number of chestnut orchards, distance between chestnut orchards, etc.).

Bulgaria

Information register of organisations authorized by the Minister of agriculture and food to carry over the conformity control for organic farming and organic production:

http://bioregister.mzh.government.bg/front/controllers

Cost of certification

There isn't a set cost established for the certification of a biological product.

The certification service of a biological product has a cost that depends on the complexity and size of the company (exploration size, number of chestnut orchards, distance between chestnut orchards, etc.).

Greece

Currently in Greece, there are 18 approved bodies for "Control and Certification of Organic farm products".

Click here for the list of the Ministry of Rural Development and Food

Examples of Greek certification bodies:

GR-BIO-01 ΔΗΩ

GR-BIO-02 ΦΥΣΙΟΛΟΓΙΚΗ ΕΠΕ

GR-BIO-03 ΒΙΟΕΛΛΑΣ

GR-BIO-05 ACERT A.E.

Basic description of the process in Greece

1. Application-Register with an accredited certification organisation

2. Verification & Approval

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

3. Private Agreement / Contract

4. Yearly Inspection / Sampling

The first 3 steps with some certification companies can be done remotely and via the internet while some other certification companies prefer to have an agent on-site in order to make sure all documentation is completed successfully.

For the application - register the following information is necessary:

- Official legal documents proving the ownership or rent, size, location and cultivar
- Basic details of the cultivation such as the propagating material used, plant and harvest period, watering source & method, pest and disease control methods, fertilizers used and their place and method of storage, machinery used for the cultivation, post-harvest management of chestnut, info for all neighboring cultivars of the Chestnut field(s) must be provided.

Examples of the documents needed can be found here:

- http://www.dionet.gr/?p=534
- http://www.bio-hellas.gr/el/ΔιαδικασίαΈνταξης/Φυτική

Then the certification company checks and verifies the application data submitted with the Greek ministry. If everything is sufficient and correct, the private agreement between the producer and the certification company must be signed. After the contracts are signed the 3 year period of conversion to Organic starts.

Conversion Period

Any farm that wishes to produce organically has to undergo a process known as 'conversion'. During this period, organic production methods need to be used but the resulting product cannot be sold as organic. Product can be sold as “Organic under Conversion”. The conversion period for Chestnut is 3 years.

During this period, the Chestnuts can be referenced as 'Organic in conversion', with no official labelling.

Yearly inspection

Finally, an on-the-spot check, necessary for the yearly inspection, from the certification company will take place during a crucial period of the cultivation.

After a successful 3 Year Conversion Period, the Chestnuts can be sold and labelled officially as “Certified Organic” - a major step for consumer’s recognition and added value for the Chestnuts!

Cost of certification

Cost is yearly and scalable depending on the total cultivated area and the number of different plots/fields. Every certification company can vary their prices.

For example: To start and for the first year 1 hectare (10.000m2) and 1 plot/field the Yearly cost is around 290€ Tax included. If the 1 hectare is scattered in different fields, then the cost changes slightly.

The above organic certification process & cost is only for “raw” chestnut product.

For processed chestnut products e.g. paste, flour etc. the organic certification process differs and the cost increases.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

7. Why go organic?

In chestnut production, there are few differences between organic and non-organic: the production techniques are fairly comparable. But organic production has the advantage of giving guarantees to the consumer, and allows a significantly higher selling price, while the constraints specific to organic production are not very numerous.

In the fight against diseases and pests, prevention plays a very important role in castane cultivation, as it does in many fruit productions. Preventive action through the choice of varieties, sunshine, the fight against humidity, appropriate pruning and tillage should offset the vast majority of treatments.

The use of industrially synthesized fertilizers in agriculture suffers from a series of problems related to the energy consumption in the manufacturing process and the environmental impact of the use of fertilizers. Society claims for more sustainable and environmentally friendly agriculture. Nitrogen is undoubtedly the nutrient that has concerned society and the scientific community and that has led to increasing pressure to adopt more sustainable cropping methods, including organic farming. Nitrogen can undergo several chemical and biological transformations and be lost to water bodies, especially in the form of nitrates, and to the atmosphere in different ways, some of which are linked toozone layer depletion or global warming, with emphasis on nitrogen oxides.

Weed management is crucial to the health of the agro-system. Weeds can compete with trees for important resources such as nutrients and water, but they also provide relevant ecosystem services that must be taken into account by farmers. At the level of each individual field, the necessary balance must be found to maintain the level of vegetation that ensures all the beneficial effects of soil protection without causing a significant loss of production.

Proper harvest, transport, storage and packaging methods and conditions are of upmost importance to not only ensure quality maintenance of produce, but also consumer safety and minimization of economic losses. Storage would require attention, since most people do not consider chestnuts as perishable and fragile crops. However, chestnuts need a proper packaging and special storage conditions to maintain its organoleptic properties. Likewise, harvest should be conducted rapidly during its season, since once chestnuts fall from the tree, they are very vulnerable to biological contamination, which can take place in just a day after. Proper harvesting methods should also be considered to avoid potential tree damage and subsequent infection usually associated with traditional harvesting methods.

Organic production offers consumers a healthy product of the highest quality. The organic agriculture contributes for living and working in a pollution-free and more balanced environment, without the toxicity risks that conventional agriculture can cause and without depleting natural resources.

The organic agriculture allows to meet the growing and unstoppable demand for organic products, both in the most immediate markets and in the world market since they are more valued and usually better paid than conventional products.

Creative ways to value small chestnuts in Ardeche (France)

This case study describes how a young chestnut farmer (called Olivier here to respect his privacy) in Ardeche (France) found solutions to the problem of storing and selling (small) traditional European

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

chestnuts. His organic chestnut farm is just several hectares large so Olivier needs to sell most of his produce directly to his clients in order to make a living from such a small chestnut farm.

Like other organic chestnut farmers, Olivier must sort his chestnuts after harvest. The most beautiful and biggest chestnuts are sold as fresh chestnuts. As chestnuts are very perishable, his biggest challenge is to keep his chestnuts good over several months (as he sells lots of fresh chestnuts on Christmas markets in December). Therefore, he uses an ancient storage technique consisting of putting the chestnuts in nets and hanging these nets inside a small river that is close to his farm. The continuous cold and oxygen-deprived conditions allow Olivier to keep his fresh chestnuts in a good condition for several months.

As Olivier's farm is situated in a rural area of France, it is not easy to sell all his fresh chestnuts directly to customers close to him. Therefore, he uses another market stream to sell a part of his fresh chestnuts for a high price that is just slightly inferieur to the price he gets for his fresh chestnuts when he sells them himself to customers. This other market stream is CSA (Community Supported Agriculture - AMAP in French). The idea behind CSA's is to have only one intermediary between the producers and the consumers in order to provide the producers with a fair price for their products. CSA's take away all the middlemen and ship the chestnuts to a large city (in this case, Lyon) where the CSA's customers are located.

After Olivier has sold his big chestnuts, he still has a lot of small or malformed chestnuts that he cannot directly sell as fresh chestnuts. These small chestnuts are used for 2 purposes:

1. to make processed chestnut products himself (such as chestnut cream and chestnut compote) that he sells for a good price;
2. to sell to wholesalers (for a comparatively low price) that will at their turn sell it to industrial chestnut processors that will make processed chestnut products (such as chestnut cream) that can be bought in supermarkets for relatively low prices.

This first option is most desirable as Olivier can sell his own organic chestnut cream for at least 12 euros per kg. The fact that the small and chestnuts damaged by insects are used for this product does not impact the quality or characteristics of the end-product at all, so this is a good option for small organic chestnut producers to add value to their smallest least marketable chestnuts.

Cooperative society Amarelante (Spain)

Being founded by 2013 in Galicia (Spain), the small cooperative society Amarelante reached for the revitalization of the rural areas and recovering the traditional value of chestnuts. The society manages harvest, storage, processing, and packaging of the chestnut variety "Amarelante", which was typical of the Ourense Spanish province.

By demonstrating success and an increasing consumer interest in organic chestnuts, the company has received regional and national funding to increase its operations following traditional, organic farming methods. Moreover, the group has also launched divulgation activities to the public, schools and universities, highlighting the cultural heritage, economic and societal value of chestnut.

More info can be found here: https://amarelante.gal.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Enhance the competitiveness of the European chestnuts' farmers and producers through an online platform on Production & Marketing of Organic Chestnuts

EcoChestnut in a nutshell

June 2022

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Chapter 1 – How to produce organic chestnuts?

1.1 – Planting and grafting

Summary of the training content	This training module identifies the optimal conditions for the creation of a chestnut grove: organisation and location of the orchard, plant material, planting techniques, etc. The module also deals with the grafting methods used in chestnut growing, comparing the advantages and disadvantages of the different methods used.
Most important **take-outs**	• Planting requires planning • Climate change is a factor influencing the orchard's density • One key factor for planting chesnut is the water content of the soil: poorly-draining or heavy soils (rich in clay) or those with a high water-table harm chestnuts by increasing the odds of contracting ink disease. • Grafting allows chestnut farmers to propagate desired varieties (including traditional European varieties) and is a great tool to maintain the rich cultural-ecological heritage of Europe's chestnut sector • Different grafting techniques are used by chestnut farmers such as T-budding, inverted T-budding and tongue/whip/slice grafts amongst others.
Most important **tips** based on the training materials	• To plant a chestnut tree, a hole twice as wide as the pot of the chestnut tree but not deeper than the depth of the pot should be dug • It is important to control weeds around the chestnut tree to prevent competition for water, light and nutrients • Tongue/whip/slice grafts are arguably the simplest techniques to use for beginning chestnut farmers

1.2 – Fertilization and management of the agricultural soils

Summary of the training content	This module introduces a definition of essential nutrients, and review how the plants can access the nutrients they need. It also explains why the plants have to be fertilized, by comparing a natural ecosystem with a cultivated field. A review of the diagnostic tools for evaluating soil fertility and plant nutritional status is provided, as well as their potential to help farmers to establish a fertilization program for their orchards. The module explores the data worldwide available on specific nutritional requirements of chestnut and how this can influence on the establishment of the fertilization program. Finally, the module discusses specific problems on soil fertility management in organic farming, and the

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

	possibilities that are open to the farmer, bearing in mind that he cannot use conventional fertilizers.
Most important take-outs	What essential nutrients of higher plants are and how do plants obtain them? What justifies the application of fertilizers? What nutrients to apply? What diagnostic methods can be used to decide on the application of fertilizers and the quantities to be applied? What specific nutritional requirements are characteristic of the chestnut? Why does organic farming restrict the use of fertilizers? How can soil fertility and nutritional status of chestnut be managed in organic farming?
Most important tips based on the training materials	Adequate crop nutrition is essential to achieve profitable yields. The farmer must give importance to the diagnostic methods that are available. On the other hand, establishing a fertilization program that reduces the risk of plant nutritional disorders in organic farming is a much more demanding task, since conventional fertilizers cannot be used. Alternatively, soil fertility and the nutritional status of plants must be maintained and promoted by natural processes, recycling organic resources or introducing nitrogen-fixing legumes into the agro-system.

1.3 – Trees Pruning and conduction of the plant

Summary of the training content	Pruning is explained in the utmost detail, addressing the reasons for its importance and why it is a factor that must not be neglected, before showing the methods of pruning that are best suited for the case of chestnut farming. These methods in question are explained with particular care for technical and timely detail. Finally, the very tools with which pruning should be made are also examined and addressed.
Most important take-outs	Pruning is the be-all-and-end-all of the tree cultivation. One of the most important tasks that should neither be neglected nor underestimated. Through pruning we ensure the growth of the trees as fast as possible, the desirable shape of the tree, an optimal yield of the nuts in terms of quality and production, the prevention of diseases and insects (good aeration of the foliage) and the easy access of machinery in order to perform the soil preparation and the mechanical picking of the nuts. The right pruning method combined with the right cultivation practices and fertilizing leads to nut production starts from the 4th till the 6th year and guarantees a stable high nut production throughout the productive life of the tree. Otherwise, the tree is not productive until the 15th year which is not profitable for the producer

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Most important tips based on the training materials	Pruning chestnuts is an important part of healthy orchard maintenance. It helps to improve the vitality of the tree, to renew the fruiting and ensure greater production. Proper pruning requires knowledge so that the tree is not damaged. Pruning should be repeated periodically and preferably every year to ensure and control the normal growth of the aboveground part of the tree. The tools that the pruner will use play a very important role in pruning. Using inappropriate tools can have devastating consequences for trees.

1.4 – Irrigation of an organic chestnut plantation

Summary of the training content	The clear importance of proper irrigation for chestnut cultivation is established, yet more importantly, the ways for how to achieve this are explained, seeing as the due manner of irrigating a crop will inevitably change given certain characteristics like the type of soil. Not enough irrigation or too much irrigation can have disastrous effects on plantations, and so the most popular methods are explained thoroughly and very carefully in this module, detailing now just the manner with which the plants are irrigated but also the necessary equipment and consumption of other resources (such as labor, time and cost).
Most important take-outs	Irrigation scheduling is the farmers' decision process related to `when' to irrigate and `how much' water requested for a crop. The irrigation method concerns 'how' to irrigate the orchard. Irrigation scheduling requires knowledge on crop water requirements and yield responses to water, the constraints specific to each irrigation method and irrigation equipment, the limitations relative to the water supply system and the financial and economic implications of the irrigation practice
Most important tips based on the training materials	Water is one of the most important components of the soil in the chestnut orchard. Soil nutrients are carried to the chestnut tree root system through soil moisture. Irrigation is critical to successful chestnut production, particularly when trees are young. Growers should have irrigation installed before planting. Small trees with limited root area will require supplemental watering, but growers should be careful to not overwater. The soil should not remain saturated and watering should occur only when rainfall becomes infrequent.

1.5 – From harvesting to storage

Summary of the training content	As any other crop grown in the European Union, chestnut production, harvesting and packaging must follow adequate good practices that ensure its safety,

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

	traceability, and maintenance of quality in retail. The module details requirements and methods allowed and encouraged under current EU regulations for organic farming, processing, and packaging that would allow producers to market these chestnuts as "organic".
Most important **take-outs**	• What legislation is applicable to organic chestnut production? • What factors can affect harvesting, transport and storage? • Which are the pros and cons of each harvest and storage method? • How to assess potential risks in chestnut harvesting, handling, and packaging. • Which packaging option would be most suitable considering each field and market?
Most important **tips** based on the training materials	Chestnut farmers become aware of the most suitable and readily available methods when considering how to harvest, transport and package their produce. This can incur in a reduction of potential crop biomass and subsequent economic losses due to inadequate handling, contamination, inadequate harvest planning or method and spoilage. With this knowledge, farmers can also choose the most suitable packaging options considering the preservation capacities and cost of each available option. This aids in ensuring consumer safety, as well as production sustainability and efficiency following organic farming guidelines.

1.6 – Methods of Products processing with organic certification

Summary of the training content	This module details the importance of chestnut processing and what exactly differentiates raw chestnuts from processed chestnuts. The methods of industrial forms in which chestnuts are available are then shown, namely, frozen chestnuts, sterilized in aluminium bags, tinned, stored in flasks and dried. The different types of methods of maintenance are then covered, with broulage and steam peeling included. Finally, the most popular processed chestnut products are explained, such as chestnut flour and chestnut cream, along other types.
Most important take-outs	In recent years, with the increasing of people's interest in nutrition and health subjects, importance of nutrition has been increased steadily and numbers of studies on enrichment of foods and production of functional products have been increased. Enrichment of foods is one of the developed applications for solution of health problems which are likely to be seen in society. For this purpose, various foods having various properties are being developed with the use of different fruits and vegetables' flours. Chestnut has a rich nutritional item, it has been used since previous times in nutrition and in daily diets due to being grown at natural conditions as well. Basically, being composed of carbohydrate, water, and a very low amount of fat, chestnut shows cereal features rather than fruit.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Most important tips based on the training materials	Chestnut is becoming popular worldwide due to its unique flavour, eating quality, and nutritional composition. Therefore, the various processing techniques based on the quality attributes of chestnuts are critical for better utilisation of the ever-increasing production. Chestnuts are available in various industrial forms, such as: (i) Frozen at −40 ◦ C, (ii) Sterilized in aluminum bags (116 ◦ C for 30–35 min after vacuum sealing (iii) Tinned (with a preservative liquid), (iv) Stored in flasks (with a preservative liquid). There are two main methods of maintenance broulage and steam peeling. The main products produced from the processing of chestnuts are flour, Chestnut cream and chestnut puree, Pastries – Marron Glaces etc.

Chapter 2 – Biological and biodynamic treatments in chestnut farming

2.1 – Weed Management and Control

Summary of the training content	This module presents a definition of weed and tries to explain the reasons why spontaneous vegetation must be controlled. It briefly reviews vegetation control methods and explains why conventional soil tillage should be reduced or avoided. It establishes the relationship between cover cropping and soil erosion, soil organic matter content and the biodiversity of the ecosystem. It questions the use of herbicides. Finally, it presents the management of herbaceous vegetation by mowing as the principal method to be used in chestnut. The module explores also the potentialities of sown vegetation
Most important take-outs	What 'weeds' means and why should they be controlled? Why were weeds controlled for centuries with soil tillage and now this method is strongly questioned? What soil erosion is and why should it be avoided? What soil organic matter is and why should it be preserved? Are weeds an important component of biodiversity? Are herbicides an alternative to soil tillage to manage weeds? Can mulches be used to manage weeds? Can thermal methods be used in weed management in chestnut? Can weeds be managed with regular mowing?
Most important tips based on the training materials	Soil management is crucial for short-term profitability and for the sustainability of production systems. The chestnut tree is no exception. Some methods of soil management, such as soil tillage, raise different environmental problems. On the other hand, spontaneous vegetation, if excessively tolerated, can compete with trees and reduce fruit yield and size. If properly controlled, herbaceous vegetation can prevent erosion and increase organic matter in the soil and

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

	biodiversity in the agro-system. The farmer must reduce or eliminate soil tillage and manage the.

2.2 – Protective measures against pests, parasites and diseases

Summary of the training content	The European chestnut sector is currently plagued by a combination of pests and pathogens that greatly threaten the health, productivity and survival of European chestnut trees. In general, it can be concluded that all three major pests/pathogens of the European chestnut tree can be treated by organic chestnut farmers, but at relatively high costs and efforts. Using the different actions mentioned in this module (maintaining good soil quality, maintaining high hygienic standards when working in the orchards), organic chestnut farmers have a set of tools available to them to do this. On the subject of two major pest insects (chestnut weevil and chestnut tortrix) endangering the storability and quality of the chestnut fruits, chestnut farmers can take several actions at different stages of the production chain to prevent fruit damage. These actions, described in the module greatly increase the storability and quality of the product.
Most important **take-outs**	• To combine the ink-disease-resistance of Asian chestnuts and the local adaptability of the European chestnut, hybrids between Asian and European chestnuts have been developed • Prevention of especially ink disease and chestnut blight is better than having to treat them • Dryocosmus kuriphilus is a species of gall wasp commonly known as chestnut gall waspusing. Due to the life cycle of the insect it is virtually impossible to control them with (organic) pesticides.
Most important **tips** based on the training materials	• Mulching is strongly recommends as a low-cost effective way to control ink disease • Farmers can plant highly-tolerant Euro-Asian hybrids (such as Bouche de Betizac) that show increased blight-tolerance • Tongue/whip/slice grafts are arguably the simplest techniques to use for beginning chestnut farmers • Instead, there are few effective method to control the gall wasp : using its natural enemy, Torymus sinensis, Selecting resistant cultivars. • cold-water treatment and warm-water treatment are 2 relevant methods to reduce the quantity of infested chestnuts infested by chestnut weevil

2.3 – Biodynamic principles applied to disease prevention fortification for cure

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Summary of the training content	Biodynamic agriculture is a form of alternative agriculture that visualizes a farm as a living organism that is made up of each of the parts of the farm looking for a synergy between all of them. The module revolves around what the principles of biodynamic agriculture are, addressing its inputs and management. Through the guidelines of biodynamic agriculture, the quality of chestnut production can be increased by preventing the onset of pests and fortifying the chestnut tree.
Most important **take-outs**	• What is biodynamic agriculture? • What are the main pests and diseases that may affect chestnut? • How can these pests be prevented through biodynamics? • What is plant and soil fortification and how can it aid in enhancing disease resistance and food quality improvement?
Most important **tips** based on the training materials	Chestnut farmers become aware of the methods and implications of biodynamic agriculture. The extended use of these practices can aid in preventing the appearance of diseases, while simultaneously enhancing the soils and chestnut quality. Considering that biodynamics considers only natural inputs, this leads to a null environmental impact and retention of soil nutrients and quality.

Chapter 3 – Commercialization and marketing in chestnut farming

3.1 – General principles and tools for marketing in the organic farming sector

Summary of the training content	Marketing is the process by which producers of goods and services aim to find out where a demand exists for certain services and products and then find solutions to those needs as well as the way to make consumers aware of the solutions. Marketing is the aspect of business which is most consumer focused as all of the principles of marketing relate directly to the consumer. It is essential for companies operating in the free market as success depends upon identifying and retaining customers in order to remain profitable and ensure business growth.
Most important **take-outs**	The four marketing principles are: • Product: main types of organic food (attributes and quality); • Price: premium price, price differences in market channels; • Place: large retail, traditional retail, specialised shops, food service channel; • Promotion: advertising, relations with private/public institutions. The extended 7 Ps include also: People; Positioning & Packaging

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Most important **tips** based on the training materials	To apply the marketing principles in real life to achieve better sales and networking as well as to power marketing campaigns chestnut growers & producers could source ideas from some worldwide examples and good-working practice: Marketing techniques in use to surprise customers; Techniques to motivate customers; Monetise the chestnut origin and brand story; Launch loyalty programme; Be creative and be where your customers are.

3.2 – Building marketing strategies dedicated to organic chestnut

Summary of the training content	The module focuses on five marketing questions that should be answered by the producer, in order to be able to promote effectively the organic chestnuts to the market. These questions refer to targeted marketing strategies, introduction of the product to the market, expansion of the existing market share, creation of a marketing niche for organic chestnuts and brand marketing of agricultural products.
Most important **take-outs**	• Marketing is a crucial factor for the success of an agricultural product. • In order to effectively promote organic chestnuts to the market you firstly need to find your target market. • Knowing who you want to approach, makes it easier to find the way to approach them. • After you know who needs the product, you have to introduce it to the market and also expand the existing market share. • A higher market share results in greater sales and bigger business success. • Finally, you need to create a strong brand, as branding identifies and distinguishes the product. • The successful handling of the above matters will lead to a successful marketing strategy and to the promotion and boost of sales.
Most important **tips** based on the training materials	From the stage of production to marketing, agricultural performance is highly dependent on many exogenous variables. Farmers have to face successfully factors out of their control, such as climatic disruptions, natural hazards and pest attacks, in order to end up with a good quality product. The good news is that, after the agro product is produced, then its promotion and boost of sales depend totally on the marketing strategy the producer follows. So it is now in his hands to make a success.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

3.3 – Essential of today's marketing : tools of digital marketing

Summary of the training content	This learning content offers examples of what are the essentials of the digital marketing as well as the main tools put in practice nowadays, what are the advantages and added value of their usage. In the beginning, learners will be introduced to essential elements of the digital marketing incl. advantages, main tools & hints on how to prepare and apply digital marketing strategy. Then, the trainee is introduced to different principles and tools to enhance communication and cooperation techniques. Last but not least, the trainees are taught on how to prepare a digital marketing plan.
Most important **take-outs**	• The main elements of the digital marketing are the creation of an internet site, social media positioning, printed materials development, audio-visual media usage, definition of points of sales actions, active participation in trade fairs culinary events and invitations and links to production sites. • The main digital marketing channels are: website marketing; internet marketing; pay-per-click (ppc) advertising; content marketing; email marketing; social media marketing; affiliate marketing; video marketing; sms messaging; google ads; analytics.
Most important **tips** based on the training materials	Digital marketing is a very popular concept and widely used marketing resource across all sectors and across all markets nowadays. It is a modern form of marketing that is based on researching customers, profiling target customers and attracting & interacting with them via email, internet, search platforms, social media, and other digital/electronic channels. The key is to develop a digital marketing strategy that puts you in all the places your followers are already hanging out, then using a variety of digital channels to connect with them in a multitude of ways. The concentration on the consumer behaviour, in particular analysing motivations/stimuli, perception of risks and information quality, customer retention and preferences for ways of communication, are inevitable for choosing the communication tools and conduction of effective marketing strategy towards consumers.

3.4 – Essential of today's marketing: social media, fairs and networking

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Summary of the training content	This learning content offers examples of what are the essentials of the social media marketing as well as best practices for social media positioning, to wider the networking, also fairs and events participation and marketing for better networking and performance. In the beginning, learners will be introduced to the main principles of the social marketing. Then, the trainee is being presented on wider audience at fairs and events, as well as the specifics for the organic food presence online.
Most important **take-outs**	• Social media offers a new possibility of interact. On one hand, it gives companies an opportunity to easily segment consumers according to their personal information and purchase preferences, and enable the fast spread of media messages to a very large number of people. On the other hand, social networks allow consumers to communicate with the companies and verifying each and every information spread. • Events can also be so powerful that it can influence such important areas as reputation, visibility and connection with the target audience. It does not take a huge injection of resources, just creativity, a message of quality of chestnuts and the application of the values of the producers. • Networking can also be used as effective communication tool through networking and bandwagon effects, horizontal networks between organic producers, or networks and clusters comprising companies vertically integrated in the supply chain, word-of-mouth marketing, influencers, ideas sharing, benchmarking, readiness to grab opportunities, etc. It is up to the chestnut producers to decide which one or combination they prefer to apply to reach their targeted audience.
Most important **tips** based on the training materials	The explosion of digital technology has transformed how businesses deal with customers, but despite the evolution of websites, blogs and social media, traditional forms of communication are still relevant and useful in reaching a target audience. Social media is about more than marketing and branding. It is quickly becoming an essential part of customer outreach for brands. Social media tools (SM), which are currently most used by buyers of chestnuts & chestnuts' products, as well as by their producers. The events are at the order of companies, brands and services, and there are endless formats to meet different strategic targets. An event can be so powerful that it can influence such important areas as reputation, visibility and connection with the target audience. Some networking

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

	related activities that could also be used as good-practices for brand & product promotion.

3.5 – Elements of economic analysis on the profitability of organic production – Business plan of an "Eco-chestnut farm"

Summary of the training content	In contrast to most other agricultural sectors, the organic and conventional chestnut sector show great similarity in production methods (very limited use of pesticides, fertilizers, comparable labour requirement, and comparable processing methods). Organic chestnut producers get higher prices for their products and receive more financial aid than conventional chestnut growers. Therefore, if organic chestnut producers manage to solve the issue of perishability and small-sized nuts (by processing a large part of their nuts for example), the production tends to be more profitable than conventional chestnut production. To help organic farmers make their business plan, the business model canvas tool can be used. This tool can prove to be a valuable planning tool for emerging organic chestnut farms. It considers nine blocks which allow new organic chestnut farmers to make a viable business plan.
Most important **take-outs**	• Large-sized chestnuts represent the majority of Europe's fresh chestnut consumption (for example, 60% of French consumption is classified as large chestnuts). • Although consumers often regard chestnuts as a natural and ecologically sustainable forest product, organic chestnuts represent barely 1% of the chestnut market. • The growing processed chestnut market has repositioned the traditional small chestnut as a fashionable fruit, which has led to a boom in consumption. • The economic model of organic farms is largely based on local consumption and supply markets
Most important **tips** based on the training materials	• One interesting processed chestnut product that maintains the identity of the fresh product is peeled, cooked and vacuum-packed organic chestnuts • The price of the chestnut products is generally higher in fresh or processed chestnut organic production because of the product's image and the consumer's "willingness to pay".

3.6 – Quality management in organic chestnut production

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Summary of the training content	Quality management of agricultural products is used to reinforce the mutual recognition of products across Europe and to guarantee customers that the labeled products they buy are produced and processed in a specific way adhering to clear criteria. Quality management by certification bodies is supplemented with quality management by producers. Focusing on the European chestnut sector, chestnut farmers use their know-how to intervene in different stages (prior-to-harvest stage, harvest stage, post-harvest and processing stage, end-product stage) of the production and processing chain to increase the quality of the final product. Chestnuts being a highly perishable product require immediate and careful post-harvest treatment to improve storage and increase the quality of the final-product. High quality end-products can only be guaranteed when chestnut farmers include different quality management measures, some of which are detailed in this module, in the production and processing chain. Two different types of labels concern the European chestnut sector: labels focusing on the geographic origin of the product and the European Organic Agriculture label emphasizing the organic origin of the raw ingredients.
Most important **take-outs**	• A growing number of European consumers choose sustainably-produced, regional and organic food. • To ensure that the claimed quality of food products is fulfilled, control mechanisms are put in place • The four main stages of quality control in agriculture and food production can be classified as following: prior-to-harvest stage, harvest stage, post-harvest and processing stage, end-product stage
Most important **tips** based on the training materials	• To ensure quality end products, chestnut growers need to control chestnut weevil populations throughout the production chain. • Organic certification is recommended for castanea cultivation, as there is little difference in the production process between conventional and organic methods, while the selling prices are significantly higher for organic methods.

Chapter 4 – Organic chestnut farming, a driving force for rural development in Europe

4.1 – Tangible and intangible heritage of European chestnut farming.

Summary of the training content	Chestnut & chestnut production are part of a lot of European region tradition and gastronomy. But does it make this tree and its fruit part of our common Heritage? This topic will introduce you to the multifaceted concept of Heritage and will help you better identify your own Chestnut Heritage.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Most important **take-outs**	• What are 'natural & cultural heritage' and 'rural heritage' • How to identify local chestnut heritage? • How to identify the potential and economic benefits of local heritage? • How to enhance chestnut heritage?
Most important **tips** based on the training materials	Chestnut cultivation heritage becomes part of the heritage because of the "meaning" with which it is invested by the local community and above. The benefit of preserving and enhancing chestnut natural and cultural heritage is reachable only if: • local heritage and its potentiality have been well identified • local heritage can be integrated into a private or public project The value of chestnut tree and chestnut cultivation as Natural and Cultural Heritage has been recognized on a European level and in different regions of our countries. It represents a real potential for the local economy.

4.2 – Organic production of chestnuts, factor of tourist attractiveness for a territory

Summary of the training content	With the organic chestnut production providing added value to the local production, chestnut and its cultivation can become part of a tourism project and contribute to the diversification of your activities. This topic provides different examples of tourism activities developed around chestnut production and chestnut orchards.
Most important **take-outs**	• Knowledge on chestnut-based tourism activities • How to identify existing tourism capacity linked with chestnuts groves and chestnuts production? • Organic production and sustainable tourism • Possibilities to diversify your activities with tourism, and its limits
Most important **tips** based on the training materials	Tourism activities can be an additional source of revenue for the local community and for chestnut producers. There are numerous inspiring example of sustainable initiatives. However, diversification and development of tourism activities are new additional challenges for farmers. To confront these challenges, this topic proposes several guidelines, based on sustainable tourism, quality and collective initiatives.

4.3 – Environmental and landscape value of organic chestnuts

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Summary of the training content	The environmental and landscape value of the chestnut grove is dependent on the engagement of organic chestnut producers, as only well-managed chestnut groves are capable of providing a plethora of beneficial ecosystem services (biodiversity preservation, soil conservation, staple food production amongst others) and other positive spin-offs (sustainable tourism for example, wildfire protection) mentioned in this module. This module proposes various levels of actions that can be implemented by different stakeholders (including chestnut farmers) involved in the management of landscapes to make this value of the chestnut groves known and recognized by a broad public. Examples are heritage trails, workshops and certification of chestnut products. Because of the involvement of many different stakeholders in the organisation and management of landscapes, a holistic approach should be followed to rebuild the chestnut grove's legacy of a landscape. Obviously, organic chestnut farmers play a pivotal role in this process. They should not be considered as mere producers of a food item, but rather *as drivers of local landscape dynamics*, taking into account the richness of the heritage that they help to protect and enhance at the environmental, social and economic level.
Most important **take-outs**	• Chestnut groves have several recognized environmental functions: Protection urban areas from wildfires, Reduction of soil erosion, Preservation of biodiversity, additional contribution to local economic development through the production of by-products related to the chestnut • The development of rural tourism justifies the enhancement of the built and landscape heritage linked to the exploitation of the chestnut forest.
Most important **tips** based on the training materials	• To disseminate landscape awareness of landscapes where chestnut groves play an important role, several tools can be used such as: landscape reconnaissance trips, chestnut grove restoration pilot sites, in situ artist interventions, etc**.**

4.4 – Organic chestnut farming, a vector of social cohesion

Summary of the training content	Europe's chestnut civilizations have been shaped by the European chestnut tree. In these civilizations the daily life of virtually all inhabitants was centered around activities related to the production, processing or marketing of chestnuts as well as to the production of wood and animal products (sourced from animals grazing and browsing in the chestnut orchards). This reliance on a tree crop resulted in remarkable craftsmanship, unique food products, a unique socio-economic dynamic

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

	as well as a unique social-ecological system. In short, all the ingredients required for social cohesion. Unfortunately, all chestnut civilizations have collapsed for numerous reasons such as the arrival of exotic pathogens and pests as well as the urbanization of Europe during the last century. Without people, the agroecosystem that the chestnut orchards are, started to function badly (low production, diseased trees), showing the important contribution of people to the maintenance of this unique agroecosystem. Luckily there is an increased awareness about the unique value of the social cohesion that recognized chestnut civilizations at peak performance. A wide range of initiatives are being launched (education of residents, inspiring residents using art and food amongst others) to rediscover the value of the chestnut trees in social bonding.
Most important **take-outs**	• Chestnut civilizations are a perfect example of social-ecological systems that create social adhesion amongst its inhabitants. For example, the cultivation of the chestnut in Corsica, imposed by governments has strongly impacted the social cohesion of Corsica's inhabitants. • Lastly, the chestnut has been receiving more attention due to different societal trends such as gluten-free diets and the natural foods trend. These trends are a great incentive for a renewed European chestnut production and then for a revitalization of the rural societies linked with chestnut production.

ECOCHESNUT is funded with support from the European Commission under the Erasmus+ Programme
Ref : 2019-1-FR01-KA202-062276
This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.