

# Introduction

The National Statistics Institute hereby presents the Agrarian Census 2009 project, with the conceptual and methodological explanations that will enable the subsequent study and analysis of the census results.

The agrarian census shall be conducted in all of the Member States of the European Union, in accordance with the community programme of *surveys regarding the structure of agricultural operations*.

This new census proposes a different focus, which will reduce the cost, and allow for the collection of a larger group of data than in previous censuses. The census information is structured into two modules: a main module for total listing, to study key data, and a complementary module by sampling, to supply more detailed structural data.

The census module includes variables that, for the most part, have been the target of study in previous censuses and surveys, such as operation size, legal status and management, tenancy regime of the land, uses of the soil, ecological agriculture, head of livestock, installations for the production of renewable energy, rural development and labour. The sampling module includes new variables related to the production methods in agricultural and livestock operations.

This anticipates the cooperation of the Statistics Institutes of País Vasco and Cataluña, through the signing of the corresponding partnership agreements.

I would like to express our most heartfelt gratitude to all those bodies, in particular the Ministry of the Environment and Rural and Marine Affairs, who have provided us with suggestions during the drafting of this project.

**Jaume García Villar**  
INE President



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## 1 The Agrarian Census

In accordance with World Programme for the Census of Agriculture 2010 of the United Nations Food and Agriculture Organisation (FAO):

The agrarian census is a large-scale statistical operation that is carried out periodically to compile, process and disseminate data regarding the structure of the agrarian sector of a country or an important part of the country. The typical structural data collected are: size of the agricultural operation, tenancy and use of the land, cultivated land, irrigation, livestock population, labour and other agricultural supplies.

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## 2 Background

The practice of carrying out a world agrarian census on ten-year intervals is a relatively new idea. Despite some previous attempts to obtain international statistics regarding agriculture, the first direct measure for said purpose took place in 1924, when the International Agriculture Institute (IAI) encouraged the performance, in 1930, of the first world agrarian census, in which a notable number of countries participated. Currently, the agricultural census of 2010 is being carried out, this being the ninth programme of the ten-year series begun by the IAI in 1930 and 1940, and which had its continuation in the six following programmes with reference years 1950, 1960, 1970, 1980, 1990 and 2000, with the latter being supported by the FAO, which took on the functions of the IAI after its dissolution in 1946.

The Spanish experience in terms of agrarian censuses is somewhat later than in other countries of our environment, and began with the carrying out of the first agrarian census in 1962. This census had its continuation in the censuses of 1972 and 1982.

As of the Spain joining the European Community on 1 January 1986, as a full-fledged member, the INE included itself in the community programme of surveys regarding the structure of agricultural operations. This programme requires modifying the dates of the agrarian census which, as determined by subsequent Regulations of the Council, must be carried out in years ending in nine or in zero. Hence, the censuses of 1989 and 1999.

The last census was carried out in accordance with Regulation (EC) No. 2467/96 of the Council, regulating the surveys and censuses to be carried out during the 1999-2007 period: one census in the years 1999 or 2000, and surveys by sampling in the years 2003, 2005 and 2007.

Since the year 2004, Eurostat, in cooperation with the Member States, has been working on the compilation of a new Regulation, foreseeing the performance, in the year 2010, of an agrarian census, and of a survey regarding production methods in the agricultural operations, and surveys by sampling regarding the structure of the agricultural operations in the years 2013 and 2016. The Permanent Agrarian Statistics Committee, in the meeting held 27-29 November 2006, agreed that its text

would include an exemption so that Spain, Portugal and Greece would carried out the next census in the year 2009.

The proposal of the Regulation was adopted by the Commission on 10 May 2007, and was sent to the European Parliament and Council. This proposal was discussed at the heart of the Council in the four meetings held on 30 May, 26 July, 12 September and 31 October 2007.

Likewise, to enable the passing of the Regulation, several meetings and exchanges of points of view have been held with the European Parliament Agriculture Committee, which adopted the proposal on 5 May 2008. The adoption, of a first reading, by the European Parliament, of this latest modified version, took place on 21 May 2008.

On 1 December 2008, the Official bulletin of the European Union published Regulation (EC) No. 1166/2008 of the European Parliament and Council of 19 November 2008 regarding the surveys of the structure of the agricultural operations, and regarding the survey on the agricultural production methods, repealing Regulation (EEC) No. 571/88 of the Council.

Agrarian Census 2009 introduces new variables regarding the growing diversification of agrarian activity, its consequences for the environment and the quality and harmlessness of agrarian products. The knowledge of these new variables will serve to support the agrarian and rural development policies of the European Union.

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### **3 Objectives**

Agrarian Census 2009 has the following fundamental objectives:

- a) To evaluate the situation of Spanish agriculture, and to follow the structural evolution of agricultural operations.
- b) To obtain a framework or directive of agricultural operations, which serves for the carrying out of sampling designs of sectoral agricultural surveys.
- c) To comply with the legal regulations established by the European Union in the different Council regulations.

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### **4 Content**

The census is structured in two modules: One main module by total listing, to collect key data, and another complementary module by sampling, to collect data regarding production methods.

In the main census module, the characteristics are integrated in the seven following sections:

1. General characteristics of the holder and of the agricultural operations, such as the geographical localisation of the operation, legal form and management of the operation, tenancy regime and destination of the production of the operation.
2. Use of the land (Used Agricultural Area (UAA)), surface areas by crop, dry and irrigated, total irrigated surface area and total irrigable surface area, energy crops and crops that are genetically modified).
3. Livestock figures.
4. Installations for the production of renewable energy (wind, bio-mass, solar, hydraulic and other).
5. Ecological production (ecological agriculture and livestock).
6. Rural development (non-agricultural complementary activities of the operation, and use of support measures for rural development).
7. Agricultural work in the operation (family and non-family labour, and work carried out by persons not employed directly by the holder).

In the complementary module by sampling, the characteristics under study are:

1. Complementary variables regarding irrigation (average UAA irrigated in the last three years, irrigation surface area according to method, origin of the irrigation water and irrigation water management regime).
2. Production methods in operations with land (maintenance of landscaping elements, working of the land, actions to preserve the land, fertilisation use and techniques).
3. Production methods in livestock operations (stable-rearing, use of pastures and installations for the storage of natural fertilisers from animal sources).

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## 5 Scope of application

The application of the census is considered from three scopes:

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### GEOGRAPHICAL SCOPE

The research covers the entire national territory: Mainland, Illes Balears, Islas Canarias, Ceuta and Melilla.

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### TIME SCOPE

Considering the type of data, the reference periods are defined as follows:

For the characteristics related to the land and to labour, the reference period is agricultural year 2009, that is, the crop year comprised between 1 October 2008 and 30 September 2009.

For the livestock figures, the reference date shall be one day between 1 March and 31 December 2009.

For the rural development measures, the reference period is the three-year period that ends on 31 December 2009 (from 1 January 2007 to 31 December 2009).

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## POPULATION SCOPE

The population studied by the agrarian census comprises all agricultural and livestock operations existing within the national territory, at 30 September 2009, regardless of the individual or legal entity that acts as the holder, and the destination of the agrarian production, that fulfil any of the following criteria:

- All agricultural operations that have at least 1 ha of Used Agricultural Area (UAA).
- All agricultural operations that have at least 0.2 ha of UAA dedicated to vegetables and plants and decorative plants that are outdoor or tarpaulin-covered, or fruit trees (including citrus) that are irrigated or nurseries or greenhouses.
- All agricultural operations that have at least 0.1 ha of UAA dedicated to vegetables in greenhouses.
- All agricultural operations that have at least 0.1 ha of UAA dedicated to flowers or decorative plants in greenhouses.
- All agricultural operations that have at least 0.5 ha of UAA dedicated to tobacco.
- All agricultural operations that have at least 0.5 ha of UAA dedicated to hops.
- All agricultural operations that have at least 0.5 ha of UAA dedicated to cotton.
- The agricultural operations with one or more Animal Units (AU), and with a Total Standard Production (TSP) equal to or greater than 0.75 European Dimension Units (EDU).

These criteria are independent, that is, at least one of them must be fulfilled to be considered an operation belonging to the target population of study.

Purely forestry operations are excluded from the census, if they do not fulfil the aforementioned conditions, as the census refers to operations that are strictly agricultural. However, when the operation studied has some forest mass, this is collected in the questionnaire.

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## 6 Concepts and definitions

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### 6.1 AGRICULTURAL OPERATION

An agricultural operation is a unit, from the technical and economic point of view, with a single management, and which carries out, within the Spanish economy,

agricultural activities, both as a main activity and as a secondary activity. In addition, the operation may have another complementary (not agricultural) activity.

Said unit, on being single from the technical and economic point of view, is characterised by the common use of labour and production means (machinery, land, installations, fertilisers, etc.). This implies that, if the operation lots are in two or more municipalities, they may not be very far away geographically.

The listing of agricultural and livestock activities is based on division 01 of the Classification of Economic Activities of the European Union (NACE, rev.2), with some exceptions, which are specified in Annex IV. In particular, this includes the operations that maintain their land, as it is not used to production ends, in good agricultural and environmental conditions, in compliance with Regulation (EC) No. 1782/2003 of the Council.

With the reform of the Common Agricultural Policy (CAP) of 2009, the *Maintenance of land in good agrarian and environmental conditions* was introduced as an agricultural activity (Article 2 of the cited Regulation). Aside from this activity, farmers should not have any other agricultural activity, to have access to the single-payment regime.

The agricultural operation, thus, may be defined as a unit of an agrarian nature (group of lands and/or livestock), under a single management, located in a determined geographical location, and which uses the same means of production.

Special cases:

a) It will be counted as a single operation, so long as there is a single management and a technical-economic unit.

– An operation that has been divided among several persons for tax reasons or other reasons.

– Two or more operations, which previously comprised independent operations and have been integrated under the management of a single holder.

– Land or terrain located in different municipal areas, used by a single holder, with the same means of production.

b) It will be counted, in the operation that corresponds to the land used previously for agrarian purposes and that, continuing with agrarian ends, has not been used during the census reference period. Likewise, non-worked land will be counted, even in the case that its only use were hunting (hunting grounds).

c) It also includes:

– The livestock operations of bulls from lidia, male pigs, rams or bucks for reproduction, stud farms and incubation rooms.

– The agricultural operations of research institutes, religious communities, schools, etc.

– The agricultural operations of industrial companies.

– The communal operations comprised of permanent pastures, meadows and other surface areas, if they are used by the communal or local administration. Excluded from this communal use are those communal lands granted at random.

d) Not to be considered agricultural operations, except if they were to carry out other activities justifying their inclusion, are:

–Riding schools, stables and land used for the exercise of race horses, if they do not carry out reproduction activities.

–Pounds.

–Pet shops, slaughterhouses, etc. (without raising animals).

–The companies that own livestock, if they are not dedicated to raising this livestock.

– Operations of draught or work animals, if the unit is not dedicated to raising the same.

– Zoos, farms for animals for furs and of species such as dogs, cats, decorative birds, etc.

– The parcelled land that, on the date of the interview, is urbanised, or in the process of being urbanised.

–Agrarian services companies.

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## 6.2 GEOGRAPHICAL SITUATION OF THE OPERATION

An agricultural operation is considered, for census purposes, to be located in the municipality in which most of its land is found, or in case of doubt, where the only or main building of the operation is located. Livestock operations without land are considered to be registered in the municipality in which the holder has declared her/his livestock, or failing said declaration, in the municipality in which the livestock installations are located.

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### 6.3 OPERATION HOLDER

The holder of the operation is that person, an individual or a legal entity, who acting freely and autonomously, takes on the risk of an agricultural operation, managing it alone or through another person. Specifically, the holder is considered to be:

- The owner, when s/he directly manages the land, although all or part of the decision-making power has been granted to an operation manager.
- The lessee.
- The sharecropper.
- Any person who, freely and autonomously, manages and takes on the risk of an operation, regardless of the tenancy regime.

A holder, as such, may exercise a triple function with regard to the operation of which s/he has the technical-economic responsibility:

- a) To take on the responsibility of the economic or financial evolution, and the risk of the results of the operation.
- b) To adopt the main technical decisions related to the use of the available means and to exercise the administrative control over the transactions of the operation.
- c) To ensure the daily management of the work of the operation, and make daily decisions regarding less important matters.

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### 6.4 LEGAL NATURE AND MANAGEMENT OF THE OPERATION

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#### 6.4.1 Legal nature of the holder

The different categories considered of the legal nature or condition are the following:

##### a) Individual

The holder is considered an individual for the purposes of the Census when it is an individual person or a group of individual persons (siblings, co-heirs, etc.) who use a commonly-held land or group of lands or livestock, without having legally formalised a company or group.

When, in an operation, two or more individual persons share the holdership, only one of them will be stated, for identification purposes, in accordance with the following preference criteria:

- The person who directs the operation or who has the greatest participation in the management.

– The person who has the greatest participation in the financial or economic responsibilities.

–The eldest person.

#### b) Legal entity

Legal entities are corporations, associations and foundations of public interest, recognised by the law, and individual-interest associations, be they civil, mercantile or industrial, to which the law grants their own status, irregardless of that of each of their associates.

For census purposes, the following shall be considered:

**Mercantile company:** that group of persons whose company contract is documented by public writ, and which in turn, is registered in the Mercantile Register. Said companies are classified as Public Limited, Private Limited, Collective and Limited Partnership.

**Public entity:** the holdership, in this case, is the responsibility of one of the different public administrations: Central, Autonomous and Local.

**Production cooperative:** that grouping that, subject to the principles and provisos of the General Law of Cooperatives and its development regulations, is dedicated, as a company in common, to obtaining agrarian products.

**Other legal condition:** this heading shall include any other legal entity not classified in the above sections: Joint Ownership, Civil Society, etc.

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#### 6.4.2 Operation manager

The person responsible for the current and daily management of the agricultural operation.

The operation manager coincides, in general, with the holder. In the case of no coinciding, the operation manager may be a family member of the holder, or another employed person.

Each operation shall have only one person as operation manager. This shall be that person who makes the greatest contribution to the management of the operation. If this contribution were to be distributed equally, the operation manager would be considered that person who is the eldest.

Operation managers are classified by sex and age group.

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#### 6.4.3 Agricultural training of the operation manager

The following categories of agricultural training are considered:

**Exclusively practical experience:** the training acquired through practical work in an agricultural operation.

Professional agricultural training: this includes all studies completed of first- or second-degree professional training in any of the specialities of agriculture, horticulture, viticulture, agricultural technology, forestry, fish farming, veterinary medicine or in an associated subject.

University agricultural training: this is comprised of all university studies completed at the university faculty or school in any of the subjects of agriculture, horticulture, viticulture, agricultural technology, forestry, fish farming, veterinary medicine or in an associated subject.

Other agricultural training: this heading includes all of the courses and classes taken with a minimum duration of two weeks, referring to any of the specialities mentioned.

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#### 6.4.4 Improvement courses taken by the operation manager during the last twelve months

These improvement courses have, as their main objective, the acquisition of new knowledge, or the development and improvement of existing knowledge. Likewise, they should be taught by an educational organisation or validated learning centre in premises or spaces adapted to this end.

It is studied whether the operation manager has carried out any improvement course in the last twelve months.

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### 6.5 DESTINATION OF THE PRODUCTION OF THE OPERATION

This section studies whether the household of the holder consumes more than 50% of the final production value of the operation.

A household is understood to be the family unit to which the holder belongs, and in which the members of the family share the same accommodation and all or part of the income, and that they collectively share certain types of goods or services, mainly the home and the food.

Gifts to family members shall be considered household consumption.

The definition of final production coincides with that of *usable production* used in the agriculture accounts, that is, it does not include products used, such as supplies, nor current losses of goods in stock (losses in the field, losses during harvest and subsequent losses due to the perishable nature of the products, weather accidents such as frost, drought, etc.) Thus, for example, the forage destined to livestock production should not be considered in the final production.

Evidently, 50% should not be considered the result of an exact calculation, but simply, an order of magnitude.

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## 6.6 TOTAL SURFACE AREA

The total surface area of the operation is comprised of the surface area of all of the lots comprising it: the surface area owned by the holder, that which is rented to others for its use, and the surface area used according to other tenancy regimes. This excludes surface areas owned by the holder, but granted to third parties.

The total surface area of the operation comprises the land worked, land for permanent pastures and other land.

It should include, therefore:

–The surface area that, as a part of the operation, is not productive and not susceptible for appreciable vegetable use, such as clear or stony ground...

–The land that, as property of the operation, is occupied by water, roads and other paths.

–The surface areas of the land for buildings, whether or not they affect the agricultural production, are included in the surface area of the operation, if they are located within, or next to, the land of the same. For example, the dwelling in the town, or the stables, are not included in the total surface area if they are not within or next to the operation.

The surface areas rented exclusively for use as pastureland, stubble ground, hunting grounds and collection of uncollected purchased productions, are included in the surface area of the owner or landlord, and are not considered to belong to the operation of the person who uses them, given that in this case, only the use of the product is rented, and not the use of the lot itself.

This would be the case of the communal land that belongs to an entity (State, Autonomous Community, Municipality, neighbourhood Community, Parrish, etc.), but on which several individuals or legal entities are authorised to exercise common rights. If the communal land is used in common by several neighbours, the surface area of common lands is considered part of the operation of the entity to which said land belongs. In the case that the owning entity assigns a part or all to a single operation (granting or renting), the granted part is assigned to the operation that uses, alone, said land.

The area of mushrooms, wild mushrooms or other fungi grown in caves, grottos or other buildings, is excluded from the total surface area.

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## 6.7 USED AGRICULTURAL AREA (UAA)

This is the set of a surface area of land work and land for permanent pastures. The land worked comprises herbaceous crops, fallow land, family farms and land used for woody crops.

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## 6.8 TENANCY REGIME OF THE LAND

This characteristic only refers to those agricultural operations with land, and is the legal form under which the holder of the operation works.

The same operation may be comprised of lands under different forms of tenancy:

a) Owned land: for the purposes of the Census, this land is that over which the holder has the right of ownership, with or without a written deed, and that which has been used peacefully and uninterrupted by the hold for thirty years, minimum, without paying taxes. Also considered to be in this group is land in usufruct.

In the family units, when the owned land is that which is a part of the operation, and some member of the nuclear family has the right of ownership over it; likewise, land is considered to be owned when it is part of an operation whose holder is a de facto association, belonging to any of its associates.

Not included in this group or in the operation, is the land owned by the holder, granted to third parties. In operations whose holder is a municipal or neighbourhood community, not a part of the same is that land that, during the reference crop year, has been granted by *lottery* or rented.

b) Rented land: a land is rented if the holder enjoys the use of the same through the payment of a fee or tax, independently of the results of the operation, whether in cash, in kind, or both at the same time. Payment has been established previously in a rental contract, whether verbal or written.

This also includes the land of any other operation whose owner grants it in exchange for the provision of a certain work or service, thus it is not land made available to an agricultural worker under the form of wages.

c) Sharecropped land: that land that is property of a third party, granted temporarily to the sharecropper through the payment of a certain percentage of the product obtained, or its equivalent in cash. The amount of said part depends on local conditions, the type of company and the contribution of the owner. The sharecropping agreement or contract may be verbal or written.

The sharecropper is considered the holder, for Census purposes, so long as there is a shared economic responsibility between owner and sharecropper.

d) Land in other tenancy regimes: this section includes the land that is not included in any of the aforementioned regimes: the land that us used by free grant, in trusteeship, by litigation, in a precarious situation, in censuses, forums, in a communal regime given at *random* or rented, etc.

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## 6.9 ASSOCIATED CROPS

Associated crops are those that coexist, during all or part of the vegetative cycle, on the same lot or crop land, during the agricultural crop year.

In associated crops, the surface area is assigned proportionally to the use of the land, for each one of the crops that form the association.

Not considered associated crops are: the mixture of crops or mixed crops, whose products are not collected separately, and which are considered to be a single crop, for example, mixed grains.

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## 6.10 SUCCESSIVE CROPS

Successive crops are considered to be those crops that succeed each other in the same surface area during the agricultural crop year.

In this type of crop, the total surface area is assigned to the main crop, considering this to be the crop with the greatest production value. In the case that the production value did not differ significantly, the main crop is considered to be that which has occupied the land for the most time.

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## 6.11 LAND USE

All of the headings comprised of the following groups include both the surface area of pure crops, and the proportional part in the case of association, and the main crop in the case of successive crops.

The total surface area of each agricultural operation with land is classified, according to its use, into three large groups: Land worked, land for permanent pastures and other land. The land corresponding to the first to groups is classified, in turn, into dry land and irrigation land, according to the following definitions.

### a) Dry land

That land which, during the reference period of the Census, has not received any more water than that which has fallen as rainwater.

### b) Irrigation land

That land which, during the reference period, has received water through a procedure established by man, regardless of its duration or the quantity of the irrigation, even if it were only temporary.

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### 6.11.1 Land worked

That land which receives cultural care, regardless of its use and the date on which said care has been carried out during the crop year. This cultural care is that which is performed with hoes, ploughs, steps, cultivators, soil preparation machines,

erradicators, etc.; this category does not include the work of spreading fertiliser, using rollers or tables, cutting, weeding by hand, re-seeding, etc., carried out in permanent pastures.

Woody crops and those crops that occupy the soil for several years, are included from the year in which they are planted, although they are not yet in production.

The following types of crop are considered in the land worked:

a) Herbaceous crops

Comprised of those plants whose air part has a herbaceous consistency (grains, pulses, potatoes, cotton, beets, forage, vegetables, etc.). Those seedbeds dedicated to the use of the operation itself, are included in the sections of the corresponding crops.

They are ploughed or cultivated regularly, generally through a crop rotation system. In a crop rotation system, the crops are succeeded over a certain land, according to a previously established plan. In general, the crops change every year, but they can also be pluri-annual. This category also includes certain crops generally classified as vegetables, decorative or industrial plants (such as asparagus, roses, decorative bushes cultivated for their flowers or leaves, strawberries, hops), although they may occupy the land for more than five years.

Herbaceous crops include: grains, pulses, potatoes, industrial crops, forage crops, vegetables, decorative flowers and plants, seeds and seedlings destined for sale, and other herbaceous crops.

b) Fallow land

Land that has remained resting during the crop year, without any crop, but that has received some labour.

This heading also includes the land sown for fertilising when green.

Two notes clearly differentiate this land from that which will subsequently be classified in the group of *non-worked cultivable land*:

–The land classified as fallow land forms part of the crop rotation or alternative.

–Fallow land is justified in the labour technique of *dry farming* because it allows for a greater use of rainwater, and thus the crop may expand to arid areas.

This includes those surface areas of herbaceous crops maintained in good agricultural and environmental conditions, irregardless of whether or not they form a part of the crop rotation.

It distinguishes between:

- Fallow land without economic aid that receives no type of financial aid or subsidy.
- Subsidised fallow land. This includes all subsidised fallow land, not only those of the land retirement programme, but also those surface areas of herbaceous crops whose production is not collected and that receive aid for maintaining the land in good agricultural and environmental conditions.

c) Family farms

Surface areas destined to the cultivation of horto-fruit agrarian products (including potatoes), whose production is mainly dedicated to the self-consumption of the operation. Its surface area must be smaller than 5 areas (500 m<sup>2</sup>).

All of the surface area whose production is commercialised regularly, shall be assigned to other headings, even if a part of the products is consumed by the holder and her/his family). The surface areas that produce forage for any animal, including that destined to animals that will be consumed by the holder and her/his family, shall be noted in their respective sections. This excludes gardens, parks and lawns.

d) Woody crops

Comprised of those plants whose aerial part has a woody consistency. These are crops that are not included in the rotation regime, different from the permanent pastures, which occupy the land for long periods of time, not needing to be transplanted after each harvest.

This group includes nurseries (except non-commercial forest nurseries that are in the forest, and which are included in the forest surface area), as well as plants for braiding (wicker, cane, reed, ...).

It excludes forest surface areas.

It includes all of the surface areas planted, even if they are not yet in production.

The area of the permanent crops that are no longer in production (abandoned) are included in other land.

The woody crops considered are: fruit trees, olive groves, vineyards, nurseries of non-forest woody crops, greenhouse woody crops and other permanent crops.

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6.11.2 Land for permanent pastures

This is land not included in crop rotation, dedicated permanently (for a period of five years or more) to the production of grass, whether cultivated (sown) or natural (spontaneous).

These surface areas may be used for grazing or for reaping for silage or hay. Hay may be used for the production of renewable energy.

The following types are considered:

a) Permanent meadows or pastures

Land permanently dedicated to the production of grass, characteristic of areas with a certain degree of humidity, and whose priority use is carried out through reaping. It can receive some cultural care, such as re-sowing, fertilising, roller or table use, etc. It excludes forage crops, as they are included in herbaceous crops. These areas may normally be used for intensive shepherding.

b) Other surface areas used for grazing

Other land not included in the above section, so long as it has been used as fodder for livestock, frequently located in poor-quality soil, such as rough terrain or land at a high altitude, nor normally improved by fertilising, cultivating, sowing or draining.

In general, this surface area is destined to extensive grazing, and cannot handle a large density of livestock, and is not accustomed to reaping.

It includes meadows for grazing, and also uncultivated land and thickets when some livestock use has been made of them. It also includes areas that are reaped but not grazed, that have a high natural value, and are located in protected geographical areas.

c) Permanent meadows and pastures that are no longer used in terms of production and that have the right to an assistance regime.

Surface areas of permanent meadows and pastures that are no longer used for production purposes, and that, according to Regulation (EC) No. 1782/2003 or the most recent eventual legislative particulars, are maintained in good agrarian and environmental conditions, and may be subject to single payment.

Being subject to single payment means that the petition for subsidy for the reference crop year has been accepted, irregardless of whether or not the payment has been made effective.

The minimum requirements for maintaining the land in good agricultural and environmental conditions include the protection of the soil from erosion, and the maintenance of the organic material and of the structure of the land, avoiding the deterioration of the habitat.

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### 6.11.3 Other land

This refers to that land that, forming part of the operation, does not constitute what is known as Used Agricultural Area (UAA).

It includes the following modalities:

a) Forest tree species

This modality includes those surface areas that are covered by forest tree species, which are not mainly used for agricultural purposes, or for purposes other than forest ends. It includes poplar groves in the interior or exterior of forests, chestnut and walnut mounts mainly destined for the production of wood, and the forest nurseries that are found in forests and are destined for the needs of the operation itself.

Likewise, it includes the surface areas that are covered with trees or forest bushes that mainly work as protection, as well as the lines of trees outside of forests and the tree boundaries which, due to their importance, it has been considered convenient to include in the tree surface area.

It includes both tree surface areas whose production is commercialised (wood, firewood or other forest products), and those surface areas whose production is destined for self-consumption, the preservation of the environment, the protection of the land and as a boundary between operations.

It also includes those surface areas that are mainly cultivated for the production of energy.

This heading distinguishes the surface areas of low mountains used with generalised felling in short periods:

These are forest surface areas managed as forest crops, where the felling period is of twenty years or less. The felling period is the time between the first planting of the trees or the last felling, and the use of the final product, where the use does not include forestry treatment such as clearing.

The final products of these surface areas could be, for example, forest bio-mass for energy purposes (poplars) or wood for splintering (paste or chipboard) from poplars or eucalyptus.

#### b) Other surface areas

This heading includes that land that, forming part of the total surface area (TSA) of the operation, is not UAA, and does not belong to any of the sections above, corresponding to the group of *other land*. Hence, we have:

– Land with spontaneous vegetation and without agricultural or livestock use. This includes uncultivated land whose production is not collected, such as wasteland, esparto fields and thickets.

It does not include wasteland or thickets that have had a livestock use during the crop year. Nor does it include the esparto fields, whose production is collected, because in this case, they should be registered within the group of woody crops, forming part of the UAA.

Wasteland is considered to be any land with a predominance of spontaneous bushes, such as rockrose, briar, gorse, whin, rosemary, thyme, palmetto, kermes oak, Spanish broom, mastic tree, etc.

- Non-worked cultivable surface areas: surface areas that, being agricultural, have not been used for economic, social or other reasons of analogous characteristics, and do not enter in the alternative. These surface areas may be used once again, with means that are normally available in the operation.
- Threshing floors, buildings, quarries, etc.: surface areas that, without being used directly for vegetable production, are necessary for the operation (soil occupied by buildings, stables, threshing floors, etc.) and the surface areas that are not apt for agricultural production, that is, those surface areas that may not be used for crops, but rather, it is through the use of some very powerful means that are not normally found in the operation (quarries, infertile land, lagoons, etc.).

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## 6.12 HERBACEOUS CROPS

The following herbaceous crops are distinguished:

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### 6.12.1 Cereals for grain

Those grains collected dry for grain, irregardless of the use, considering straw to be a sub-product. It includes those grains used for the production of renewable energy.

It also considers mixtures of grains, such as mashlin (mixture of wheat and rye). It excludes those grains collected for consumption when green, given that this are considered to be forage crops.

Within this group, the following species are distinguished:

- Soft wheat (including spelt wheat)
- Durum wheat
- Barley
- Oats (including possible mixes with: wheat, barley or rye)
- Rye (including mashlin)
- Rice
- Maize (this excludes the forage maize that is included in forage crops and the sweet maize that is for human consumption that is included in vegetables)
- Other (including other mixtures of grains): sorghum, triticale, millet, buckwheat, birdseed...

The two species of wheat mentioned are clearly differentiated by the destination of their flours. Thus, soft wheat, which is the most common, is destined for bread baking, whereas the durum wheat flours are not good for bread baking and are used for pastas and semolas.

Another differentiated criterion between said species is the price, and thus, the variety of durum wheat gains much higher prices in the markets than the varieties of soft wheat.

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#### 6.12.2 Pulses for grain

These include those pulses collected dry for grain, irregardless of use, including those destined for the production of renewable energy. They are plants cultivated and collected mainly for their protein content. If the vegetative cycle is shortened to therefore carry out a use when green, said pulses are registered in the group of vegetables, when they are for human consumption, and in the group of forage crops if the destination were animal consumption.

The following groups are distinguished:

- Peas, lima beans, *Vicia faba* L. and sweet lupines (without mixtures)
- Other pulse grains such as garbanzos, dried beans, lentils, hairy vetches, lentil vetches, carob, foenogreek, etc., including mixtures, even if they are with grains

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#### 6.12.3 Potatoes

This heading refers to both potatoes cultivated on worked land, and potatoes in horticultural cultivation.

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#### 6.12.4 Industrial crops

These are herbaceous crops whose product requires, for its final use, a previous industrial process. This includes industrial plants for the production of renewable energy, and the seeds of oily plants (sunflower, safflower, rapeseed, soy, peanut and others).

This considers the surface areas dedicated to the cultivation of the following species:

- Sugar beets: that whose destination is the production of sugar and of alcohol (including that produced for energy). It therefore excludes that whose destination is the production of forage for animal consumption, as well as that dedicated for the production of seeds.
- Cotton
- Hemp
- Textile linen
- Other textile crops: other plants cultivated mainly for their content in fibre: jute, abaca, sisal, kenaf, etc.
- Sunflowers

- Oily linen
- Soy
- Rapeseed and turnip seed
- Other oily crops. Other plants cultivated mainly for their content in oil, collected in dry grain: mustard, poppy, sesame, tiger nut, peanut, etc.
- Tobacco
- Hops
- Other aromatic and medicinal plants and spices. These are plants or parts of plants that are used in the pharmaceutical or perfume industry or for human consumption. Spices are distinguished from vegetables in that they are used in small amounts, and supply flavour, before substance, to food.

In general, aromatic and medicinal plants are not sold directly for consumption, given that they need an industrial process before being used. However, some culinary plants, such as parsley, may be used directly.

This group includes: pepper for paprika, saffron, anis, lavender, camomile, belladonna, gentian, peppermint, liquorice, sage, pot marigold, valerian, parsley, fennel, basil, angelic, cumin, digitalis, herb hyssop, jasmine, marjoram, lemon balm, spearmint, poppy, greater periwinkle, etc.

- Other industrial plants: sugar cane, chicory...

This heading includes the areas of those new crops used **solely** for the production of renewable energy, such as *Miscanthus giganteus*.

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#### 6.12.5 Forage crops

These are the crops whose sole destination is livestock feeding, subject to rotation regimes with other herbaceous crops, and which occupy the same surface area for less than five years. Forage crops may be consumed *green* or be subject to some preservation process (silage, tedding...). *Green crops* (as compared with *dried grain*) are normally used to allow for livestock to graze, or to collect them green, but may also be collected dry, such as dry hay. In general, the entire plant, except the roots, is collected, and used for forage.

This shall include those crops not used in the operations, but rather destined for sale, whether for direct use in other operations or for industry. It also includes those grains and industrial crops collected and consumed green for forage, and those used for the production of renewable energy.

Seeds are excluded.

The following species are distinguished:

– Roots and tubers. This comprises the forage beet, plants from the Brassicæ family destined for forage, and by extension, other plants cultivated for their roots or tubers, destined for forage, although this may not be their habitual use, taking for example, the carrot.

This heading shall include all those plants from the Brassicæ family destined for forage, irregardless of whether the root or the stalk is collected. Examples: turnip, beet, carrot, Jerusalem artichoke, parsnip, yam, tapioca, swede...

– Pluri-annual green forage. Gramineæ for pastures, hay or silage included in a normal crop rotation, and that occupies the land for at least one crop year and less than five years, both if the sowing is of pure gramineæ or if it is of mixtures. Before sowing again, the surface areas are laboured or worked profoundly or the plants are destroyed by other means (herbicides).

Here, this includes the mixtures of predominantly herbaceous plants and other forage crops (in general, pulses) for grazing, collected green, as well as dry hay. It does not include annual herbaceous crops (those that last less than one crop year), or the different species of clover or the different varieties of alfalfa. Examples: common wild oat, pallenis spinosa, fescue, prairie hay, sorghum halepense...

– Forage maize. This includes all types of forage maize, not collected for grain (the entire cob, parts of the plant or the entire plant). This includes the forage maize consumed directly by the animals (without silage) and the entire cob (grain+rachis+peel) collected as a food product or for silage, as well as use for the production of renewable energy.

– Forage pulses. Pulse plants collected green, mainly for forage. This includes mixtures of pulses (normally more than 80%, with other forage crops collected green, or such as dry hay). It comprises the different species of clover (annual or perennial), as well as other pulses cultivated mainly for forage, such as alfalfa, onobrychis viciifolia, tufted vetch, grass pea, white lupin, fenugreek, French honeysuckle, bitter vetch, carob...

– Other annual green forage. This includes annual crops such as grains, certain annual gramineæ such as hordeum murinum or annual poa, and other plants belonging to other families, such as the cruciferae not previously included (rapeseed, etc.) if collected green.

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#### 6.12.6 Vegetables

This heading groups those species destined for human consumption, which have a horticultural nature and are obtained both in horticultural cultivation and in laboured land. It excludes potatoes.

Within this heading the following species are considered:

– Leafy vegetables: kales, cabbages, Brussels sprouts, collards, asparagus, celery, lettuce, escarole, spinach, chard, thistle, green chicory, endive, borage...

– Fruit: watermelon, melon, pumpkin, courgette, cucumber, aubergine, tomato, pepper, strawberry, wild strawberry...

– Flower: artichoke, cauliflower, broccoli...

– Roots and bulbs: garlic, onion, spring onion, leek, table beet, carrot, radish, turnip...

– Pulses: green beans, green peas, lima beans...

The surface area cultivated with vegetables is classified into each of the following modalities:

– Vegetables in laboured land: those cultivated on land that enters in the alternative with other non-horticultural crops, such as grains, pulses for grain, industrial crops.

– Vegetables in horticultural cultivation: those cultivated on land on which solely the cultivation of horticultural species is carried out, whether outdoors or tarpaulin-covered.

Crops outdoors exclude all those carried out under any type of covering, whether temporary or permanent, as well as crops with sand in soil that are outdoors.

Within the tarpaulin-covered systems, worth mentioned are the following:

a) Windbreaker fencing: barriers made of trees, cane matting or plastic material, that limit the excessive speed of the air, without preventing its circulation.

b) Padding: coverage in direct contact with the soil, generally made of plastic, that does not imply any armour.

c) Tunnel: a device, that is normally temporary, with armour that is not visitable, and that confines a certain volume of air between the soil and the protection.

d) Seedbed: a particular case of the aforementioned, with permanence that is very restricted in time.

e) Outdoor sand in soil: intensive cultivation system based on layers of manure and sand, which enables hastening the harvest, water economy and use of water with certain salinity.

– Vegetables that are in greenhouses or enclosed:

This heading includes those horticultural species cultivated during all or part of their vegetative cycle under **visitable** armour, whether fixed or mobile, with total or partial closure, with or without HVAC elements. The mentioned structures are usually made of wood or metal, and the coverage is made of plastic or glass panes.

In the case of a mobile greenhouse that has only been used as such, the surface area to be registered is obtained by adding the different surface areas covered by said greenhouse. Conversely, when the fixed or mobile greenhouse has not been moved and it is as successive use of the same surface area, this must only be counted once.

In the case of multiple-floor greenhouses, only the surface area of the base shall be recorded.

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#### 6.12.7 Decorative flowers and plants

Nurseries are excluded.

Using the same concepts as for the vegetables, in this case, two forms of cultivation are distinguished:

- Outdoor and/or tarpaulin-covered
- Greenhouse and/or enclosed

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#### 6.12.8 Seeds and seedlings destined for sale

This considers the surface area dedicated to the production of seeds and seedlings destined for sale, excluding grains, pulse grains, sown potatoes and oily plants, which should be included in their respective crops.

The seeds and plants for the needs of the operation itself are included in the endorsement of the corresponding crops.

This includes the seeds of herbaceous forage plants.

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#### 6.12.9 Other herbaceous crops

These include the surface areas of all those herbaceous crops that have not been included in previous headings and that exist in the operation.

This heading only includes only crops with little economic importance, and that cannot be classified in another group. Mixtures of crops shall be in another part, given that, either according to the definitions of their respective variables, or failing more data, in the crop with the greatest economic value.

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### 6.13 WOODY CROPS

This considers the surface area dedicated to woody crops regularly planted or in dissemination. The regular planting of trees presents an ordered or geometric distribution that is more or less perfect, with a density greater than forty trees per hectare, and at least, with two parallel rows.

Disseminated trees are applied the same treatment as associated crops, noting in the corresponding heading, both the surface area in pure cultivation and the proportional part in dissemination.

They are included from the year that they are planted, although they are not yet in production.

The area of permanent crops that are no longer in production (abandoned) is included in the group of other land as cultivated but non-worked surface areas and/or forest surface area.

It includes the trees that have originally been planted for the production of wood, but whose fruit are collected annually, systematically, before being felled (for example, cherry trees and hazelnut trees). If the collection is marginal and not systematic (the acorns eaten by pigs or those fruits that are only collected for the consumption of the operation), the area is included within the forest tree species.

The following groups of woody crop species are distinguished:

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#### 6.13.1 Citrus trees

This group includes the following species: orange, mandarin orange (including tangerines, clementines and satsumas), lemon, grapefruit, bergamot, lime, etc.

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#### 6.13.2 Fruit trees from temperate climates

Fruit tree plantations that are traditionally cultivated in temperate areas for the production of fruit.

This includes the following species:

Apple, pear, apricot, peach and nectarine, cherry and sour cherry, plum, medlar, quince, azarole, sloe, etc.

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#### 6.13.3 Fruit trees from subtropical climates

Fruit tree plantations that are traditionally cultivated in subtropical climates for the production of fruit, such as banana, avocado, custard apple, kiwi, fig, persimmon, pomegranate, papaya, mango, tropical pineapple, guava, litchi, passion fruit, prickly pear, date palm, nopal, etc.

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#### 6.13.4 Berries

Plantations of berries that are traditionally cultivated in both temperate and subtropical climates for the production of berries.

This includes the following species: currant, raspberry, dewberry, blueberry, blackberry, elderberry, sea buckthorn...

It excludes strawberries, which are counted within vegetables.

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#### 6.13.5 Nut trees

Plantations of nut trees that are traditionally cultivated in both temperate and subtropical areas.

This includes the following species: almond, hazelnut, chestnut, walnut, pistachio, pine nut, etc.

The referenced species are included in this section when their main use is the fruit. In the opposite case, they are assigned to the section of *forest tree species*.

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#### 6.13.6 Olive groves

The surface area destined for the cultivation of olive groves is classified by the destination of the olive as:

- Table olives
- Olives for oil

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#### 6.13.7 Vineyards

The surface area of the vineyard is classified according to the destination of the grape as:

- Table grapes
- Grapes for raisins
- Wine grapes

In wine grape vineyards, distinction is made between the surface areas dedicated to the cultivation of grape varieties destined for the production of quality wines, and those destined for the production of other wines.

Quality wines comprise the production of wines with Protected Designation of Origin, and the wines with Protected Geographical Indication.

The patterns for grafting are included in the previous sections, according to the foreseen destination of the future production.

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#### 6.13.8 Nurseries

This registers the surface area occupied by young woody plants cultivated outdoors and destined for transplanting. It excludes forest nurseries, destined for needs of the operation, which are found in forest land.

This section includes grape nurseries, wine rootstock, fruit nurseries, of decorative plants, the forest (except those that are found in the forest and are destined for the needs of the operation) and trees and bushes for planting in gardens, parks, roads and hedges, as well as their rootstock and young plants.

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#### 6.13.9 Woody crops in greenhouses

This considers the surface area occupied by those woody species that, during all or part of the vegetative cycle, have been under visitable armours that are fixed or mobile, with total or partial closure, with or without HVAC elements.

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#### 6.13.10 Other permanent crops

This heading includes the surface area of all those outdoor permanent crops that exist in the operation, and that have not been included in the previous headings, for example, carob, capers, agaves, white mulberries, blackberries, junco, cane, raffia, bamboo, esparto grass, rattan, tea, coffee, etc.

It includes the surface area with Christmas trees, so long as they are cultivated with a commercial purpose, outside of the forest on regularly cultivated surface areas. Abandoned Christmas tree plantations are considered forest surface area.

This section also records the surface area specifically planted with micorried woody species of the genus *Quercus* (oaks, holm oaks, .l..) and *Corylus avellana* L. (hazelnut) for the production of truffles.

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### 6.14 MUSHROOMS, WILD MUSHROOMS AND OTHER CULTIVATED FUNGI

This comprises, exclusively, the cultivation of mushrooms, wild mushrooms and other fungi in buildings, built and adapted for said purpose, or in undergrounds, grottos and caves.

It registers the surface area of beds, pockets or similar surface areas available for cultivation that, during the twelve months of the reference period, have been filled, once or several times, with humus.

The surface area is counted only once, even if it has been used several times during the crop year.

This excludes truffles, as they are included in other permanent crops.

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#### 6.15 ENERGY CROPS

Crops that are used mainly in the production of thermal and electrical energy, and in the production of bio-fuels, such as bio-ethanol, bio-diesel, biogas, bio-methanol, bio-dimethyl ether, bioETBE (ethyl, terbutile ether), bioMTBE (methyl terbutile ether), synthetic hydrocarbons or their mixtures produced from biomass, bio-hydrogen or pure vegetable oil.

These crops (already included in their corresponding headings of the questionnaire) benefit, in accordance with Council Regulation (EC) No. 1782/2003, from:

- Specific aid for energy crops (Article 88).
- Payments linked to the retirement of production land, when said production takes place in a retirement surface area (Articles 55 and 56).

These two forms of aid work in parallel, and both contribute to financing the development of this type of crop. Operation holders may opt for one or another regime, depending on their specific situation.

The aid shall cover solely those surface areas whose production is the object of a contract between the farmer and the transformation company, except in the case that it is the farmer her/himself who carries out the transformation in the operation. The surface areas that are the object of a request for the energy crop regime may not benefit from the production land retirement regime. However, those holders who produce raw materials for the production of energy in retirement land may opt for one type of aid or the other.

This does not include other areas of energy crops, in particular, other land that benefits from payments linked to the single payment regime or to the simplified payment regime per area.

The questionnaire distinguishes between those surface areas in retirement land and those surface areas from the rest of energy crops.

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#### 6.16 CULTIVATION OF GENETICALLY MODIFIED ORGANISMS (GMO)

These are organisms, with the exception of human beings, whose genetic material has been modified in such a way that it is not produced naturally in mating or in natural recombination (Article 2 of Directive 2001/18/EC of the European Parliament and Council).

An organism is understood to be any biological entity capable of reproducing or of transmitting genetic material.

Cultivated GMOs must appear in a public register where their location is reflected.

The surface area of these crops is already counted in their corresponding headings.

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## 6.17 IRRIGATION

Data is collected regarding the irrigation, referring to three types of surface areas: The average Used Agricultural Area (UAA) irrigated in the last three years, the surface area irrigated in the crop year and the surface area not irrigated in the crop year, with the operation having installations and water available.

Likewise, data is collected regarding the source and the irrigation water management regime.

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### 6.17.1 Average Used Agricultural Area (UAA) irrigated in the last three years

This collects the average of the used agricultural surface area which has been irrigated in the last three years, including the reference year.

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### 6.17.2 Surface area irrigated in the crop year

The surface area of all of the lots that, during the census year, have effectively been irrigated at least once.

The irrigated surface area of the operation is classified according to the irrigation method, as:

- Sprinkler irrigation. Procedure by which the plants receive irrigation water in the form of artificial rain.
- Localised irrigation. Form of irrigation in which the water is localised in the soil through localised emitters, with the amount of water supplied being controlled for each plant (drip, micro-sprinkler, spray, etc.).
- Surface irrigation. Form of irrigation by which the water is applied over the lot, either flooding the entire area or draining or circulating the water through small furrows between the row of crops, using the force of gravity (furrow, flood, etc.).

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6.17.3 Surface area not irrigated in the crop year, with installations and water available to the operation

This is the surface area not irrigated that, during the reference year, could have been irrigated, as the operation had its own technical installations as well as sufficient water.

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6.17.4 Origin and management regime of the water consumed in the irrigation

The total water consumed for irrigation is classified as a percentage in two ways, first considering the origin of the water, and then considering the management regime of the same.

a) Origin of the water consumed for irrigation:

– Groundwater (well, dwelling or springs in the operation). That water located under the operation or near it, extracted through pumps from perforated or excavated wells, or that flow freely from natural springs or the like. This water is not used only for irrigation, but may also be destined for other uses in the operation.

– With surface water (ponds or reservoirs) from within the operation. These are small natural pods or artificial reservoirs, located totally within the operation or only used by one operation. The water may come from rain or from groundwater. If the groundwater is stored in the operation solely during the irrigation season, it shall be included in the heading on groundwater.

– Lakes, rivers or natural water flows from outside of the operation. Considered as such is that surface water from lakes, rivers and other water flows not built artificially for irrigation purposes. This includes small reservoirs (with less than 1,000m<sup>3</sup>) built solely for the good functioning of the pumps in small aquatic currents.

– Common water supply networks. Water from outside of the operation, other than that mentioned in the above section, accessible to at least two operations (in general, after payment of a fee). The water supply may be public or private, irregardless of its origin. This includes reservoirs, channels and artificial rivers, even if they have not been built specifically for irrigation reasons. As a general rule, this includes the water transported to the operation in deposits, except if it clearly comes from surface water from lakes, rivers and other water flows that are not built artificially for irrigation purposes.

– With regenerated water. Water from the treatment of wastewater, that is provided to the user as recycled wastewater.

– With desalinated seawater or brackish water. Water from highly salty sources, such as the Atlantic Ocean or the Mediterranean Sea, which is treated to reduce the saline concentration (desalinisation) before use, or from brackish water from certain rivers or lagoons (with a low saline content), which may be used directly, without treatment.

#### b) Irrigation water management regime

This records the percentage of the volume of water used, according to the type of concession that the operation has available:

- With a concession integrated in an Irrigation community, if the holder of the right to water for irrigation is the Irrigation community.
- Another water management regime. Any management regime other than the Irrigation community.

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### 6.18 LANDSCAPING ELEMENTS

Linear elements, such as hedges, rows of trees or stone walls existing in the operation, which receive minimum care to avoid deterioration, irregardless of whether or not any type of aid is received for their maintenance.

These are continuous rows of trees, hedges or stone walls that delimit different lots or pastures, or simple lines in humid areas.

Hedges are rows of branches or bushes making a hedge, sometimes with a central row of trees.

Rows of trees are continuous rows of forest vegetation, planted in order to delimit agricultural land or along roads or water flows. This excludes the vegetation that might be considered part of the UAA (vineyards, plantations of fruit trees, etc.).

Stone walls are structures build with stone or brick, such as walls of ashlar or walls with mortar.

It is studied whether these three elements have been installed in the last three years, or in a previous period.

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### 6.19 WORKING OF THE LAND IN HERBACEOUS CROPS

This characteristic refers to the area of herbaceous crops during the reference year. It only considers the work carried out in the main (not successive) crops, between the harvest and the following sowing.

It excludes the area of those herbaceous crops not sown during the reference year, for example, hops or pluri-annual green forage.

It also excludes that land for permanent pastures, family farms, woody crops and greenhouse surface areas.

Three types of work are considered:

- Conventional (ploughing with mouldboards or disks). This registers a surface area with a labour that implies investment in the land, normally with a mouldboard or disk plough in a first operation, followed by a second labour with disk grading.

– Minimum working. Practice of preservation labour that maintains the plant waste (at least thirty percent) in the surface area of the land, for the control of erosion and the preservation of the moisture, normally without inverting the soil.

This practice may include the following systems:

a) Labour in bands or strips. This refers to a system in which the furrows with a width of twenty centimetres are prepared to receive the seeds, while the land between the furrows is not touched, and remains covered with waste. This system causes more disorders in the land, and supplies less coverage over the rows than direct sowing.

b) Vertical labour. This refers to a system in which the land is prepared with a plough that does not invert the soil, and causes little compacting. For this reason, the surface area normally remains with a good coverage of waste on the surface.

c) Labour in ridges. This is the system of ridges and furrows. The ridges may be narrow or wide, and the furrows may be parallel to the rows of contours, or built with a slight slope, depending on whether the objective is to preserve moisture or to drain excess moisture. The ridges may be semi-permanent, or built every year, which shall determine the amount of material waste that remains on the surface. With the semi-permanent system, which has a good coverage of waste between the ridges, there will still be a lesser coverage than with the direct sowing system. In general, this system is less conservative than labour in strips.

– No-till farming (zero tillage). This is a minimum labour practice in which the crop is sown directly in the soil, without cultivating since the collection from the previous crop. The battle against weeds is waged via the use of herbicides, and the stover is maintained to control erosion.

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## 6.20 ACTIONS TO PRESERVE THE SOIL

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### 6.20.1 Winter covering of the land in herbaceous crops

This section includes the area of herbaceous crops sown/cultivated during the reference year, which are or are not covered with plants or waste during the winter.

It excludes those herbaceous crops that are not sown during the reference year, such as hops and pluri-annual green forage. It also excludes family farms, land for permanent pastures, woody crops and greenhouse surface areas.

Bare agricultural land or land without plant waste in the surface areas is especially vulnerable to the loss of nutrients. In order to reduce these losses, which are damaging to both the environment and the economy, one of the most effective tools is to maintain the land covered with plants at all times. This reduces the erosion of the soil, and the loss of nutrients, pesticides and faecal microbes, and increases the organic material of the soil.

The following types of covering are considered:

- Winter cultivation. Surface area of herbaceous crops that are sown in the autumn, and the grow during the winter (such as winter grains), and are normally collected or used for grazing.
- Covering or intermediate cultivation. These are plants that are sown specifically to reduce the loss in fertilising substances, due to their dispersion in the air, and in surface or groundwater, during the winter or other periods in which the land might be bare and susceptible to loss. Normally, they are buried during the spring, prior to sowing another harvest, and are neither collected nor used for grazing.
- Plant waste. Land covered with plant waste and stover from the last harvest during the winter, irregardless of whether they are from the prior harvest or have been added by the farmer.

The plant waste may be straw, stover or other parts of plants that provide a good coverage, such as the sugar beet. This excludes potatoes, because their stalks degrade rapidly.

Labour operations are carried out in the spring, although certain operations may be performed in the autumn, so long as they leave sufficient plant waste on the surface. These labour methods may be with chisels, disks or the like. Straw may be retired for energy or other uses, but a minimum waste of 10% must be maintained.

This includes java moss or the spontaneous re-sprouting of grains.

- Bare land. Surface area that is ploughed or worked in the autumn, but not sown or covered in the winter with any plant waste, in such a way that it remains bare until the sowing in the spring.

This excludes those labour methods that leave more than 10% of plant waste on the surface, as they are included in plant waste.

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#### 6.20.2 Rotation of herbaceous crops

This section asks about the surface area of herbaceous crops that does not form a part of the planned crop rotation. These are surface areas that are cultivated with the same crop for a period of three or more consecutive years.

Certain pluri-annual crops, such as decorative, industrial or other plants (roses, asparagus, hops, strawberries, etc.) are considered to be mono-cultivated if they remain in the same land for more than three years.

This excludes those vegetables in horticultural cultivation, greenhouse crops and land for permanent pastures.

Crop rotation is the technique that consists of the annual alternation of different crops on the same surface area or lot, in a sequence planned over time.

Conversely, when the same crop is sown year after year on the same surface area, this is known as mono-cultivation.

The rotation of different species of grain is considered a crop rotation.

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#### 6.21 FERTILISER USE AND TECHNIQUES

This studies the total surface area fertilised with organic fertilisers.

Solid manure is defined as excrements of domestic animals, with or without *bed straw*, which eventually contains a scant amount of urine.

Slurry is the urine of domestic animals that eventually contains a scant amount of excrement and/or water.

Semi-liquid manure is a mixture of the excrement and urine of domestic animals, which eventually contains water and/or a scant amount of *bed straw*.

In the surface areas fertilised with manure and slurry, we distinguish between the surface areas in which an immediate incorporation of the fertiliser has been carried out, that is, an incorporation of the fertiliser in the soil before approximately four hours.

The immediate incorporation of the solid fertiliser or manure may be carried out with the fertiliser itself, or using a chisel or disk plough subsequently.

In the case of semi-liquid manure, and for the purpose of reducing the emission of ammonia and avoiding odours, the incorporation is carried out through injections. These injections may be shallow (at 50 mm), deep (at 150 mm, making deep cuts or grooves in the land with special blades), or injection in strips.

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#### 6.22 LIVESTOCK

This section refers to those production animals belonging to an operation or raised by the same at 30 September 2009, including migrating animals and livestock in an integration regime or contract. An **integration regime** is any type of contract that implies a dependency in the supplies, animals, feed, and sale. It therefore includes vertical integration, with private companies, and horizontal or cooperative integration.

It excludes pets and other domestic animals, with the exception of horses, that are not used for production or in lucrative activities, that is, that are destined solely for recreational activities of the family of the holder.

It excludes:

- Transition animals, such as females destined for mating.
- Animals granted to another operation, by virtue of a contract or rental.

The species and classifications of the animals that are considered in the census are the following:

#### 6.22.1 Bovines

This includes all types of buffalo.

##### a) Cows

Female bovines than have given birth. It comprises, as may be the case, those younger than two years of age, if they have given birth. They are classified as:

– Dairy cows: cows that, due to their race or ability, are maintained solely or mainly for the production of milk destined for human consumption, or destined for its transformation to dairy products. This includes breeding dairy cows, that is, those, destined for the slaughterhouse after their last lactation.

– Other cows: cows that, due to their race or ability, are destined solely or mainly for the production of calves, and whose milk production is used mainly for the feeding of their young. This includes working cows and other breeding cows destined fro the slaughterhouse.

##### b) Other bovines aged two years old and over

– Bulls: this section comprises studs, working oxen and other males over two years of age.

– Heifers: this includes female bovines two years old and over that have never given birth, even if these females were pregnant on the day of the interview.

##### c) Bovines one year to under two years of age

– Males

– Cows: excluding those that have given birth.

##### d) Bovines under one year of age

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#### 6.22.2 Ovines

– Ewes and lambs for replacement

Ewes are females of the ovine species that have given birth at least once. This heading also includes those ewes that have been destined for the slaughterhouse.

Lambs for replacement include those females of the ovine species that have not given birth and whose purpose is to replace or increase the flock of ewes.

–Other ovines

This includes the young animals of both sexes, suckling lambs, young lambs and Easter lambs, whose destination is sacrifice, as well as stud rams and wethers.

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#### 6.22.3 Caprines

- Nanny goats and kids for replacement

Nanny goats include females of the caprine species that have given birth at least once; as well as those nanny goats that are destined for the slaughterhouse.

Kids for replacement are females of the caprine species that have not given birth and whose destination is replacement or to increase the flock of nanny goats.

- Other caprines

This includes young animals of both sexes, kids whose destination is sacrifice, as well as stud bucks and castrated male goats.

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#### 6.22.4 Porcines

This excludes boars.

- Dam sows and sows for replacement, weighting 50 kilograms and more

Dam sows are those female pigs used for reproduction that have given birth. Once they have finished suckling their suckling pigs, and are destined for sacrifice, as breeders, they should be counted in the **other porcines** section.

Sows for replacement, weighing 50 kilograms or more, are females that have not given birth and whose purpose is to replace or increase the group of dam sows, with their live weight being at least 50 kilograms.

- Suckling pigs weighing less than 20 kilograms.

This heading includes those pigs, males or females, whose live weight is less than 20 kilograms; regardless of their destination.

- Other porcines

This comprises those animals that are not included in the sections above: boars, pigs for fattening of both sexes, whose live weight is greater than 20 kilograms, and breeding pigs destined for the slaughterhouse, both male and female.

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#### 6.22.5 Equines

This chapter includes the following species: horse, mule and donkey.

It comprises all those animals of these species, regardless of their age, sex, race or aptitude: for reproduction, riding, work, competitions and others.

This includes horses used by the family of the holder for recreational purposes.

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#### 6.22.6 Poultry

##### – Laying hens

This comprises all those hens that have begun laying, both if their eggs are destined for consumption and if they are used for reproduction.

It also includes young hens that have not yet begun laying, breeding hens for sacrifice and reproductive roosters for laying hens.

##### – Broilers

This includes broilers and other chickens raised for the production of meat, whether in a growth or fattening stage; regardless of their weight, race and age.

##### –Other poultry

This comprises turkeys, ducks, geese, guineafowl, pigeons, quails, pheasants and partridges raised in captivity, regardless of their age and weight. It excludes those birds raised in captivity for hunting, and not for producing meat.

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#### 6.22.7 Does

Female rabbits that have given birth at least once, destined for the production of rabbits for meat.

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#### 6.22.8 Beehives

This includes all beehives, whether mobile or fixed, regardless of their format.

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#### 6.22.9 Other animals

This includes all those **animals** raised in captivity that have not been included in previous headings, that belong to the operation and that are used for the production of agrarian products, such as dromedaries and camels. It excludes pets, male rabbits, animals for fur, frogs, snails, worms, molluscs and insects.

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## 6.23 TYPE OF ANIMAL HOUSING

This section registers the average number of animals in the different types of stable, for bovines, porcines and laying hens. It shall only consider those stables used during the crop year, including those that are temporarily empty.

The floors of the stables may be built with an impermeable and hard material, such as cement, or they may be grated, that is, with metal, cement or plastic gratings over a channel or ditch that collects the faeces and urine of the livestock. The floor may be completely or partially grated. The grating may cover the entire floor, or only a part where the animals defecate.

The animals in the stables may be in fixed or free housing.

Fixed housing is that in which the animals are permanently tied in their spaces, and cannot move freely. In this type of stable, the floor may be:

- a) Made of cement, on a slant, with a layer of straw or woodchips, and with a shallow channel behind the animals to collect part of the faeces and urine, while the other part is removed regularly as solid manure. In some cases, the channel is equipped with a drainage pump to collect the drained liquid.
- b) The same as the former, but with a deeper channel for collecting and storing the liquid part.
- c) Made of cement without a slant, and with a covered channel with a grading behind the animals, to collect the faeces and urine as semi-liquid manure.

Free housing is that in which the animals may move freely. Within free housing, there are two types.

In the first, the animals have free access to the entire surface area of the building or enclosure (small area separated by a wall or fence for livestock). Normally, a thick bed of straw is spread over the floor, which is removed once or twice during the winter, as fertiliser. The floor is usually made of cement in the area where the animals remain and are fed.

In the second, the stable is divided into rows of individual cubicles, where the animals may remain, but are not tied. The floor of each cubicle may be covered with a layer of straw, sand or woodchips, or instead, with a plastic or rubber sheet. The faeces and urine are deposited in the walkways between the rows of cubicles. These walkways may be grated or asphalted with cement covered with rubber. The walkways are cleaned at least once a day, with a tractor or an automatic cleaner, and the excrements are removed in the form of semi-liquid manure.

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### 6.23.1 Type of housing for bovine livestock

The following types are considered:

- Fixed housing with a differentiated system for the collection of solid manure and slurry. The housing is fixed, and the excrements are removed mechanically from the stable in the form of solid manure.
- Fixed housing with a system for the collection of semi-liquid manure. In this case, the housing is fixed, and the manure and the urine are collected in a ditch under the floor, in the form of semi-liquid manure.
- Free housing, with a differentiated system for the collection of solid manure and slurry. Free housing where the excrements are removed mechanically from the stable as solid manure.
- Free housing, with a system for the collection of semi-liquid manure. In this case, the animals may move freely, and the excrements are collected in a ditch under the floor, in the form of semi-liquid manure.
- Other types of housing. Any type of housing other than the aforementioned. In particular, this includes those stables with straw floors, where the animals are not tied.

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#### 6.23.2 Type of housing for porcine livestock

For the porcine livestock, the following types are considered:

- Stables with partially grated floors.
- Stables with totally grated floors.
- Free housing over straw bedding, and with a ditch for the collection of faeces.
- Other types of stable.

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#### 6.23.3 Type of installation for laying hens

In accordance with Directive 1999/74/EC of the Council, the rearing of laying hens may be carried out through three systems:

- a) In conditioned cages where the hens have at least 75 cm<sup>2</sup> of cage surface area per hen. This is a type of battery cage, with certain structural characteristics that supply more space to the birds than the traditional systems, and that stimulate a more natural behaviour. They also have bedding made of sand, straw or wood chips. Normally, the excrements are removed on manure transport conveyor belts.
- b) In unconditioned cages where the hens have at least 550 cm<sup>2</sup> of cage surface area per hen. As of 1 January 2003, this type of cage may not be built or used, and its use will be prohibited as of 1 January 2012.
- c) Nest systems without cages (with a minimum of one nest per seven hens) with convenient hangers or perches. The density of birds must not exceed nine laying hens per m<sup>2</sup> of usable surface area.

The types of installations considered are:

- In straw bedding (free housing with bedding). This is in a closed building that is thermally isolated and with a forced or natural ventilation. A minimum of one third of the area of the floor must be cushioned (with straw, wood chips, etc.) and two thirds must be organised as a ditch, covered with a grating, to collect the excrements every 13 to 15 months. The nests, feeders and troughs shall be located over the area with the grating to keep the bedding dry.
- Battery cages with a conveyor belt for manure. Battery cages with the mechanical removal of manure via a conveyor belt located under the cages. The conveyor belts take the manure to a closed storage located outside of the installation, where solid manure is obtained. In some systems, the drying is carried out on the belts themselves, with air blown through pipes, or in drying tunnels located over the cages.
- Battery cages with a ditch for droppings. The birds are located in cages with one or more floors. The excrements fall into a deep ditch or channel under the cages, by itself or with the help of a rake, together with the water spilt from the troughs. The manure is removed once a year or more, with a rake or tractor. Some systems include hot air for its drying in the ditch or channel.
- Battery cages on stilts. This case is similar to the above, in which the battery cages are elevated over the floor, and there is a hatch between the cages and the ditch. This type has some large openings in the walls that allow for the air to enter, in order to accelerate the manure drying. The cages and the ditch are separated in such a way that the fertiliser may be removed at any time, without disturbing the hens.
- Other types of battery farming. Any type of battery farming other than those with manure conveyor belts, with a ditch for droppings and on stilts.
- Other installations. Any type of installation other than the above. In particular, this includes those systems in which the birds may move freely in the countryside or over an enclosed surface area of land.

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## 6.24 USE OF PASTURES

This section collects information regarding the use that the herbivores (bovines, ovines, caprines, equines and camelids) of the operation make of the pastures, distinguishing between whether the grazing is done within the operation itself or outside of it.

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### 6.24.1 Grazing on land in the operation itself

Surface area used as pasture in the operation. This is the total surface area of pastures of the operation which is used for grazing, during the crop year, by the livestock of the operation considered. This land may also be used through reaping.

Grazing is understood to refer to permanent meadows or pastures, the other surface areas used for grazing and the pluri-annual green forage. It does not include the surface areas of those permanent meadows or pastures that are no longer used for production purposes, are maintained in good agrarian and environmental conditions and are the object of single payment.

Pastures may be the property of an operation or they may be rented during the crop year for the sole use of their animals. It does not include unassigned communal pastures (at random or rented) or in which animals from several operations graze at the same time or in successive eras during the crop year.

For this surface area, we study the number of months during the crop year in which the animals of the operation have been grazing on these surface areas, regardless of whether they have stayed there overnight, or slept in the stables. One day of grazing is considered to be a minimum of two hours. If, in the same surface area, animals from different categories graze, the longest period of time shall be registered.

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### 6.24.2. Grazing on communal land

Communal land is land that does not belong directly to the operation, and in which communal rights are applied. This may be land for permanent pastures, horticultural land or other surface areas.

In general, communal land is property of the State, Autonomous Community, municipal councils, parishes or neighbourhood entities, in which several holders, individuals or legal entities, are authorised to exercise common rights to operate.

This excludes those surface areas of communal pastures which, during the reference year, have been divided by luck or by renting.

We study the total number of animals of the operation that use the communal pastures, and the number of months that, during the crop year, they have used those pastures, regardless of whether or not they have stayed overnight on those surface areas.

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## 6.25 INSTALLATIONS FOR THE STORAGE OF NATURAL FERTILISERS FROM ANIMAL SOURCES

This studies whether the operation has installations for the storage of natural fertilisers from animal sources, making distinction between whether they are solid manure, slurry or semi-liquid manure, and whether these installations are covered. It excludes those installations that are not used during the reference year.

It also studies the use of tanks and/or ditches for the storage of semi-liquid manure, and the percentage of the total fertiliser produced in the operation, and that is sold or granted to other operations to be used directly as fertiliser, or to companies for industrial treatment.

The definitions of solid manure, slurry and semi-liquid manure appear in section 6.21.

A covered installation for the storage of natural fertilisers from animal sources is understood to be any installation that is covered in such a way that it is protected from the rain and other precipitation, and emissions of ammonia are reduced. The covering may be built with a cement top, or with a waterproofed tarp.

Those structures made to order to cover the installations, may be simply roofs made of cement, wood or metal, supported by pillars placed in the perimeter of the installation, or they may be installations that closed with walls and ceilings made of plastic, wood or cement.

Other types of covering are designed to float on the manure. In circular installations, they may be plastic reinforced tarps that are attached to the edges and resting on a central pillar. Other times, they are simple floating tarps of reinforced plastic, that sometimes include floaters, and may or may not be attached to the edges of the installation.

A tank is a watertight deposit, with or without a covering, used for the storage of semi-liquid manure.

A ditch is a hole dug in the ground that is normally waterproofed, or a pool that is reinforced for the storage of semi-liquid manure.

The structure is normally rectangular or square, with the walls sloped towards the centre, and it may be lined with an impermeable material. Emptying is carried out with a pump or a mechanical excavator.

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## 6.26 EQUIPMENT FOR THE PRODUCTION OF RENEWABLE ENERGY

Equipment located on land of the operation that, during the census reference period, has produced renewable energy, either for the market or for its own agricultural production. This includes that equipment that is shared by several operations.

It does not consider that equipment in which the operation is not directly involved in its production, either through investment or active participation. That is, it does

not include that equipment which is installed on land of the operation that is granted to a third party for the production of renewable energy.

Nor does it include that equipment that produces energy solely for the household of the holder, such as, solar panels that produce hot water for the household of the holder, or the heating systems of the household of the holder that are operated with wood from the operation.

Renewable energy is that which is derived from natural processes and which is restored constantly. There are several forms of renewable energy, derived directly or indirectly from the sun, or from the heat generated in deep layers of the earth. It includes the energy generated from solar, wind, biomass, geothermal, hydro-energy and marine resources, solid biomass, biogas and liquid bio-fuels.

There is a limited number of renewable energies, and a large number of technologies for their use, most of which are in a stage of research and development and have not yet reached commercial maturity. The renewable energies studied are those that are considered to be economically viable, or in a stage of economic viability:

a) Wind. Wind energy is a kinetic energy obtained through wind turbines for the generation of electricity.

This studies the equipment used by the agricultural operation for the production of wind energy.

b) Biomass. Biomass is an organic compound that is solid, liquid or gaseous; a non-fossil material from a biological source, used as fuel for the production of heat, electricity or for transport.

Solid biomass is comprised of:

– Vegetable coal: solid waste from the destructive distillation and pyrolysis of wood or other vegetable material.

– Firewood/wood waste/ other solid waste. This includes those crops intentionally planted for energy purposes (black poplars or poplars, willows, etc.), many woody materials generated by industrial processes (the wood industry, and the paper industry in particular), or provided directly by forest and agricultural development (firewood, wood chips, bark, grain husks and nut shells, manure, ground vine shoots, etc). Combustion is the preferred technology for this solid waste.

The renewable energy obtained from biomass may be in the form of liquid bio-fuels or biogas.

Liquid bio-fuels include bio-ethanol, bio-diesel, bio-methanol, bio-dimethyl ether, bio-petroleum. The main liquid bio-fuels are the bio-diesel and bio-ethanol/ETBE used as fuel for transport. They can be made from new or used vegetable oils, and may be mixed with, or may be a substitute for, those fuels based on petroleum. The vegetable oils are mainly soy, sunflower and rapeseed. Under some circumstances, used vegetable oils may also be used as a supply for the process.

Biogas or bio-methane is a gas that is mainly comprised of methane and anhydride of carbonic acid produced by the anaerobic digestion of the biomass.

This includes the equipment used by the agricultural operation for the production of biogas through the anaerobic fermentation of the manure in slaughterhouses, beer factories and other food and agriculture industries. Other possible methods for producing biogas are the health filling gas made from the combustion of the waste deposited and the gas from sewerage sludge produced by its anaerobic fermentation.

The questionnaire studies, separately, the equipment used for the production of bio-methane (biogas) from the rest of biomass energy.

c) Solar This studies the equipment used by the agricultural operation of the production of renewable energy through solar radiation, in order to obtain hot water and the generation of electrical energy.

Solar energy may be obtained from:

–Photovoltaic solar panels that convert sunlight into electricity. These panels are normally made of semiconductor materials, which generate electricity through their exposure to light.

–Thermal solar energy obtained through thermal electrical plants or through equipment for the domestic production of hot water or pool heating.

It does not include passive solar energy for the heating, cooling and direct illumination of a residence or other buildings in the operation.

d) Hydro-energy. Equipment used by the agricultural operation for the production of renewable hydraulic energy, which converts into electricity the potential and kinetic energy of the water in hydroelectric plants. This includes hydroelectric plants with simple pumping.

e) Other types of renewable energy. Any equipment used by the agricultural operation for the production of renewable energy that is not included in the above sections. This includes, for example:

–The geothermal energy available from the heat emitted from the interior of the earth's core, normally in the form of hot water or steam, which is used directly as heating or in agriculture or for the generation of electricity.

–The energy of the tides/waves/ocean that is a mechanical energy derived from the movement of the tides or the waves, and used for the generation of electricity.

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## 6.27 ECOLOGICAL PRODUCTION

The terms, biological agriculture or organic agriculture, are synonyms of ecological agriculture, but integrated agriculture is not ecological agriculture.

The use of the term, ecological production, is regulated by Council Regulation (EC) No. 834/2007. In accordance with these norms to qualify production as ecological, the following is required:

- The identification and separation of lots, animals and products used or produced ecologically from those that are not.
- To be registered at the corresponding control authority-organisation in each Autonomous Community, and be subjected to its controls.

The census studies both the surface area in which ecological production methods are applied (qualified surface area), and the surface area that is in a period of conversion. This considers the surface areas with ecological agriculture (qualified as such and/or in a period of conversion) of the following crops:

- Grains
- Pulses in grain
- Potatoes
- Sugar beets
- Oily plants
- Vegetables
- Permanent meadows or pastures and pluri-annual green forage.
- Fruit trees (except citrus trees)
- Citrus trees
- Olive groves
- Vineyards
- Other crops. This group includes: forage roots and tubers, industrial crops, decorative flowers and plants, forage crops except pluri-annual green forage, seeds and seedlings destined for sale, other herbaceous crops and fallow land, nurseries, permanent crops in greenhouses and other permanent crops.

Likewise, it studies whether ecological production methods are also applied to animal production. It records the number of head of: bovine, porcine, ovine and caprine, poultry and the existence (or not) of other animals.

Qualified ecological production surface area is understood to be the used agricultural area in which the production adjusts completely to the principles of ecological production, and therefore has passed the period of conversion.

The surface area that is in a period of conversion towards ecological agriculture methods, refers to the used agricultural area in which ecological agriculture methods are applied, but in which the necessary period of conversion has not yet finalised, that is, from the moment of its initial registry at the control authority/organisation until the time of its final qualification.

In addition to the general norms, ecological vegetable production shall require:

- Labour and crop practices that maintain or increase the organic material of the soil, reinforce edafic stability and biodiversity, and prevent the compaction and erosion of the soil.
- The fertility and the biological activity of the soil shall be maintained or incremented through the pluri-annual rotation of crops, such as pulses and other green fertilisers, and the application of ecological production animal manure.
- This allows for the use of biological preparations.
- Only fertilisers and soil conditioners that have previously been authorised may be used.
- Nitrogenated mineral fertilisers shall not be used.
- All production techniques used shall prevent or minimise any contribution to environmental contamination.
- The prevention of damages caused by plagues, disease and weeds shall be based, fundamentally, on the production of natural enemies, the selection of natural species, crop rotation, crop techniques and thermal processes.
- In the case of the existence of a threat to a crop, only certain authorised fitosanitary products may be used.
- Ecological production seeds and materials should be used.
- Only previously authorised products for the cleaning and disinfection of vegetable production may be used.
- The collection of wild plants that grow naturally in natural areas, forests and agricultural areas shall only be considered ecological if, during a period of at least three years prior to the collection, they have not received any treatment with non-ecological products, and the collection does not affect the stability of the natural habitat or the maintenance of the species of the area.

As regards livestock production:

- Non-ecologically raised animals may be taken to an operation, but that shall only be considered ecological after passing the period of conversion.
- The stocking density shall be limited, and the housing conditions should adjust to the needs for development and the physiological and ethological needs of the animals.
- Management techniques that promote animal well-being shall be used.

- For reproduction, adequate races shall be chosen, and natural methods shall be used, although artificial insemination is permitted, so long as it is not induced with hormonal treatments. Cloning and embryo transfer are not allowed.
- Food shall be based on ecological fodder.
- The prevention of disease shall be based on the selection of races, and on ecological livestock management practices.

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## 6.28 RURAL DEVELOPMENT

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### 6.28.1 Other complementary activities that are directly related to the operation

This section collects information regarding other complementary activities that are directly related to the operation, other than the work of the operation, and with economic repercussions on the same. If several activities were carried out in the same operation, they should all be registered.

A complementary activity that is directly related to the operation is understood to be any activity that uses the resources (surface area, buildings, machines, ...) or the products of the operation. This includes that agricultural work carried out for other operations.

If only labour resources are used, it shall be considered that these persons work for two different entities; therefore, these activities shall not be considered directly linked to the operation.

It shall now include those activities that have no direct link, for example, a hairdresser's, an insurance agency, or a shop in which none of the operation's own productions are sold. Nor does it consider sporadic complementary activities.

The activities considered are:

- Tourism, accommodation and other recreational activities

All activities of tourism, accommodation, operation visits by tourists or other groups, sporting activities, recreational activities, ... So long as they use the surface areas, buildings or other operation resources. An activity carried out in a building other than those originally built for agricultural purposes, is considered to be a separate commercial activity, and should be excluded, unless it improves activities that are already available in the operation, for example, a new building for camping.

- Craftwork

Production of artisan objects in the operation itself, by the holder, family members or non-family labour, under the condition that they also perform agricultural work, without considering the form in which the products are sold.

- Transformation of agricultural products

All transformation, in the operation, of a basic agricultural product in a transformed secondary product, both if the raw material has been produced in the operation, and if it has been acquired externally. This includes, among others, the preparation of sausages, cheese, preserves, ...

It shall include the direct sale, to the consumer, of said agrarian productions, so long as one of the transformation phases of the product takes place in the operation. It does not include, therefore, milk sold directly to the neighbours, as it does not require transformation.

It comprises the transformation of any product, so long as said transformation is not considered to be an agricultural activity. Thus, the preparation of wine and the production of olive oil are not included, unless a significant part of that production is carried out with products that are purchased from another operation.

It shall not include the production of products that are destined solely for their own consumption, or the sale of possible surplus.

#### –Transformation of wood

Transformation, in the operation, of raw wood destined for sale (building wood sawmill...).

All subsequent transformation, for example, the production of furniture from the building wood, should be included in craftwork.

#### –Aquaculture

Production of fish, crabs, ... raised in the operation, both in artificial environments and in rivers, the sea, etc., so long as it uses the resources or products of the operation. This excludes fishing activities.

#### – Production of renewable energy destined for sale

This includes the production of renewable energy for the market, including biogas, bio-fuel or electricity, through windmills or other equipment, or from other agricultural raw materials.

It excludes the renewable energy produced to cover the needs of the operation itself. Nor does it include the rental of land for the establishment of windmills, nor the sale of raw materials to other companies for the production of renewable energy.

#### – Agricultural work under contract for other operations, carried out with equipment from the operation

Agricultural work under contract, generally carried out with material from the operation for other operations, such as landscaping maintenance, agricultural and environmental services, ...

#### – Non-agricultural work under contract

Non-agricultural work under contract carried out with material from the operation, outside of the agrarian sector, for example: snow cleaning, hauling work...

–Forestry

Forest work that uses labour, machinery and the equipment of the operation, carried out in the operation itself or in other operations.

–Other

Other complementary activities other than the above, including raising animals for furs.

This includes the use, during part of the year, of buildings for the storage of caravans, boats and other objects, so long as said buildings are used for agricultural purposes the rest of the year. It excludes the income of buildings that are not used for agricultural purposes, as they are not considered an activity directly related to the operation.

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6.28.2 Importance of the other complementary activities directly related to the operation

The importance of the other complementary activities is measured as a function of the percentage ( $\leq 10\%$ ;  $10 < \% \leq 50$  and  $50 < \% \leq 100$ ) that these other activities represent in the final production of the operation.

Final production comprises all that income from agriculture and livestock, and from the other complementary activities, plus direct payments. It excludes income from other activities not related to agriculture (income from work, capital income and income from social transfers).

Direct payments include both connected aid and disconnected aid, and exclude aid for investment.

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6.28.3 Rural development measures from which the operation has benefited in the last three years

This collects information regarding whether the operation has benefited, in some way, from rural development, in the last three years, to the expense of the European Agricultural Fund for Rural Development (EAFRD). These measures are listed in the Council Regulation (EC) No. 1698/2005, modified by Council Regulation (EC) No. 2012/2006.

It includes those measures directly received by the operation. It does not include, therefore, those measures on a higher level (regional or in group), even if the operation has benefited indirectly from that aid.

The measures considered in this section are the following:

a) Use of advisory services

The aid is destined for helping farmers and forest farmers to handle the costs generated due to the use of advisory services aimed at improving the global production of their operation. These services include, as a minimum:

- Management requirements that are compulsory in public health, animal health and welfare, plant health, environment and animal welfare.
- Good agrarian and environmental conditions.
- Norms regarding labour security, based on community legislation.

*b) Modernisation of the agricultural operations*

This is aid for tangible or intangible investments that improve the global performance of the agricultural operation, through the introduction, among other elements, of new technologies, and which fulfil the community norms applicable to these investments.

In the case that the investments are carried out in compliance with community norms, only those investments aimed and compliance with new norms shall benefit.

*c) Increase in the added value of agricultural and forestry products*

The aid shall be given in favour of tangible and intangible investments aimed at reinforcing the efficacy of the sectors performing the transformation and commercialisation of the primary production which:

- Improve the global performance of the company.
- Affect the transformation and/or commercialisation of products, or the development of new products, processes and technologies.
- Fulfil the community norms that are applicable to said investments.

In the case that the investments were made to comply with community norms, only those investments made by micro-companies and aimed at compliance with new norms shall benefit.

d) Compliance with the norms established in the community regulations

This aid contributes, in part, to compensating for the costs and losses of income incurred by farmers who have to apply norms in the area of environmental production, public health, animal and plant health, animal well-being and work safety. These are new norms that impose new obligations or restrictions on agricultural practices, which have a significant repercussion on the customary costs of the agricultural operation, and that affect a significant number of farmers.

e) Participation in programmes relating to food quality

The foreseen aid:

- Shall only benefit those agricultural products destined for human consumption.
- Shall be destined for programmes related to food quality, and those programmes whose only objective is to guarantee a stricter control of compliance of compulsory norms shall not benefit from the aid.
- Shall consist of an annual incentive whose amount shall be determined by the level of the fixed costs incurred due to participation in said programmes, during a maximum period of five years.

f) "Natura 2000" aid to agricultural areas

This is aid that is granted annually to farmers per hectare of UAA, for the purpose of compensation for the additional costs and losses of income derived from the difficulties implied in the area of application of Directives 79/409/EEC and 92/43/EEC regarding the preservation of natural habitats and of wild fauna and flora.

g) Payments linked to the directive regarding the water framework

This is aid that is granted annually to farmers per hectare of UAA, for the purpose of compensation for the additional costs and losses of income derived from the difficulties implied in the area of application of Directive 2000/60/EEC regarding water policies.

h) Payments related to ecological agriculture

This is aid that is granted annually to those farmers who subscribe voluntarily to agro-environmental commitments in operations that practice ecological agriculture, in accordance with the rules specified in Council Regulation (EC) No. 834/2007.

i) Payments related to other agro-environmental aid

This is aid that is granted annually to those farmers who subscribe voluntarily to agro-environmental commitments. These commitments shall be subscribed, as a general rule, for a period of between five and seven years, and impose greater demands than the compulsory requirements (public health, animal health and welfare and plant health, environment and animal welfare) and than the minimum requirements related to the use of fertilisers and plant health products.

j) Aid regarding animal welfare

This is aid that is granted annual and which covers the additional costs and losses of income derived from the difficulties in applying the commitments to animal welfare considered in Council Regulation (EC) No. 1782/2003.

Said commitments are subscribed, as a general rule, for a period of between five and seven years, although in justified cases, a longer period may be established.

#### k) Diversification towards non-agricultural activities

This is aid for the diversification towards non-agricultural activities, whose objective is to improve the quality of life in rural areas, and promote the diversification of the rural economy. This aid is granted to a member of the family unit of the operation.

#### l) Promotion of tourist activities

The aid for the promotion of tourist activities is aid that covers:

- Small-scale infrastructures, such as information centres and the signposting of tourist sites.
- Recreational infrastructures, such as those that give access to natural areas, and the accommodation of a reduced capacity.
- The development and/or commercialisation of tourist services related to rural tourism.

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### 6.29 AGRICULTURAL LABOUR IN THE OPERATION

Agricultural labour is comprised of all those persons who, having completed the compulsory schooling age, have carried out agricultural work during the period comprised between 1 October 2008 and 30 September 2009.

Those persons who, having reached the age of retirement, still work in the operation, should be included as agricultural labour.

Agricultural work is considered to be all that human activity that contributes to the economic results of the agricultural operation. It comprises:

- Work in organisation and management: purchases, sales, accounting.
- Working in sowing, cultivating and collection of the harvests.
- Work for the livestock: preparation and distribution of fodder, milking, care.
- Work in storage and conditioning in the operation: silage, collecting, packaging.
- Work in the maintenance of buildings, machinery and installations.

This does not consider the labour employed in the operation working, working for others or in a mutual aid regime, for example, the labour of an agricultural services company or of cooperatives. Nor does it consider as agricultural work of the

operation, those domestic tasks, carried out by the holder or members of her/his family, or by the employed personnel that is not family. This also excludes those fabrication tasks of products that are derived from the production of the operation, such as cheeses or sausages. Nor is agricultural work understood to be tasks in forestry, hunting or fishing, and other non-agricultural activities, whether or not they are carried out by the operation, so long as it is possible to measure them separately.

The transport work of the operation shall only be considered if it is carried out by the labour of the same.

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#### 6.29.1 Family labour

This characteristic is only recorded in those agricultural operations whose holder is an individual. Considered to be family labour are the holder, her/his spouse or partner, and other members of the family, so long as they carry out agricultural work for the operation, whether continuously or occasionally, as wage earners or non-wage earners.

Included as **other members of the family of the holder** are those, ascendants, descendents and other relatives, including persons related by marriage or adoption, irregardless of whether they live in the operation or elsewhere.

For the holder, this records variables such as sex, age, days worked in the operation and whether or not s/he has carried out another complementary activity.

The rest of the relatives are classified by sex, the percentage of time worked in the operation, and whether or not they have carried out another complementary activity.

A complementary activity is understood to be any activity, excluding that activity related to the agricultural work mentioned, carried out in exchange for remuneration (payment, wages, benefits, fees or other income, for the services rendered, including payment in kind). This considers both those activities carried out in the operation itself (campgrounds, hostels for tourists, ...) and those activities, whether agricultural or not, that are carried out outside of the operation.

Distinction is made between complementary activities that are directly linked to the operation, and activities that are not linked directly to the operation. The definition may be viewed in section 6.28.1.

The main activity is the activity the occupies the most time, whereas the secondary activity is that which occupies the least time.

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## 6.29.2 Non-family labour

That labour, other than that of the holder and her/his family members, who carries out agricultural work in the operation, and who receives, in exchange, some type of remuneration (salary, wages, participation in benefits or another type of payment, including payment in kind).

The partners of a cooperative or association that **carries out agricultural work** in an operation shall be considered non-family labour, irregardless of whether they are wage earners or not.

This comprises:

a) Labour of permanent employees, whose provision is continuous over the year.

This includes those persons who could only work for a part of the crop year for the following reasons:

1) Special conditions of the production of the operation that only require work during a part of the agricultural year.

2) Absence due to holidays, illness, accident or death.

3) Beginning or ending of employment in the operation. This includes those workers who stop in one operation to work in another, during the agricultural crop year.

4) Total shutdown of an operation due to accidental causes (flood, fire, etc.)

This collects the number of persons classified, by sex, brackets of complete working days, or the equivalent, worked in the operation.

It also includes the operation manager, when s/he does not appear as family labour. Aside from the sex and age group, this studies whether the employed operation managers carry out another complementary activity, making distinction between those complementary activities that are directly linked to the operation, and those that are not linked directly to the operation.

It also records the other permanent employees who are involved in complementary activities directly related to the operation, distinguishing whether the activity is the main activity or the secondary activity.

b) Labour of temporary employees. This assigns a number of working days carried out by the workers.

A *working day* is understood to be any day of a duration such that the worker receives the wages corresponding to a complete working day, and during which, the work normally carried out by full-time agricultural labour, is carried out. Holidays and sick days are not counted as working days.

A complete working day is the normal working day of those employees who are regularly employed full-time. The working time of temporary labour is converted

into complete working days, even if the contract specifies that the working days shall be longer or shorter than those of the regularly employed workers.

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#### 6.30 WORKING DAYS CARRIED OUT IN THE OPERATION BY PERSONS WHO ARE NOT EMPLOYED DIRECTLY BY THE HOLDER

This studies the number of working days worked in the operation by persons who have not been employed directly by the holder, during the twelve months of the agricultural crop year, for example, self-employed workers or employees for hiring agencies.

This excludes that work carried out by accounting firms and the mutual help work performed in which no remuneration is paid.

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## 7 Measurement units and typology of the operations

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### 7.1 MEASUREMENT UNITS

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#### 7.1.1 Surface area units

The surface area of the crops is expressed in hectares and areas.

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#### 7.1.2 Livestock units

The livestock data is expressed in number of head or in **Animal Units** (AU), which are obtained by applying a coefficient to each species and type, in order to add different species in a common unit.

The coefficients used are the following:

Dairy cows: 1; Other cows: 0.8; Male bovines 24 months old and over: 1; Female bovines 24 months old and over: 0.8; Bovines 12 months to under 24 months old: 0.7; Bovines under 12 months old: 0.4; Ovines: 0.1; Caprines: 0.1; Dam sows and sows for replacement: 0.5; Suckling pigs: 0.027; Other porcines: 0.3; Equines: 0.8; Laying hens: 0.014; Broilers: 0.007; Ostriches 0.35; Other poultry: 0.03; Does: 0.02. This excludes beehives, which are not converted into AU.

As regards the last Agrarian Census, since the only the coefficient of the does has been modified, and a new coefficient has been added for ostriches, according to Eurostat recommendations.

### 7.1.3 Work units

The work data in the operation is expressed as the number of working days, in a percentage of time worked, or in units of work per year (UWY); one UWY is the equivalent of the work that one person performs, working full-time, throughout one year.

The following chart provides the equivalencies between UWY, working days, hours worked, and percentage of the annual working time of a person dedicated full-time:

Porcentaje	Horas	Jornadas	UTA
>0 a <25%	>0 a <456	>0 a <57	>0 a < 0,250
25 a <50%	456 a <912	57 a <114	0,250 a <0,500
50 a <75%	912 a <1369	114 a <171	0,500 a <0,750
75 a <100%	1369 a <1826	171 a <228	0,750 a <1
100%	1826 y más	228 y más	1

### 7.1.4 other conventional measurement units

Agrarian Census 2009 also uses the following conventional units:

#### a) Standard Production (SP)

The production of an agricultural characteristic is the monetary value of the gross production at the price on exiting the operation.

A **standard production** (SP) is understood to be the production value corresponding to the average situation of a certain region, for each agricultural characteristic.

Production is understood to be the sum of the value of the main product or products, and the secondary product or products. The values are calculated by multiplying the production per unit by the price on exiting the operation, without including VAT, the taxes direct products and payments.

The standard productions correspond to a production period of 12 months (the agricultural crop year from 1 October 2008 to 30 September 2009). For those vegetable and animal products for which the duration of the period is longer or shorter than 12 months, an SP shall be calculated to correspond to the increase or to the annual production of 12 months.

The SPs are provided by the Ministry of the environment and Rural and Marine Affairs.

The standard productions are determined by using average basic data, calculated over a reference period of five years. They are updated every so often, according to economic trends.

The Total Standard Production (TSP) of an operation is the equivalent of the sum of the values for each characteristic, multiplying the standard productions per unit by the corresponding number of units.

#### b) Economic dimension unit

Operations are classified, according to their economic dimension, into different classes.

The economic dimension of an operation shall be defined, depending on the total standard production of the operation, expressed in euros.

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## 7.2 TYPOLOGY OF THE OPERATIONS

The typology is a double classification of the agricultural operations, according to:

- The technical-economic orientation
- The economic dimension

Both the dimension and the orientation are determined on the basis of standard production.

The economic dimension of an operation is given by the total standard production of the operation, expressed in euros. The Technical Economic Orientation (TEO) is defined, depending on the participation of the standard production of each activity, as compared with the total standard production of the operation.

The classification of the agricultural operations according to their TEO is provided in annex V.

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## 8 Census procedures

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### 8.1 DIRECTORY OF AGRICULTURAL OPERATIONS

Prior to the fieldwork, we are preparing a base framework or directory of agricultural operations. The model for preparing this directory has been based on a first treatment and use of administrative sources of the agrarian area, and a subsequent integration with the available statistical sources.

The main agrarian administrative sources used have been provided by the Ministry of the Environment and Rural and Marine Affairs (MARM). This is the register of farmers who receive aid, managed by the Spanish Agrarian Guarantee Fund (FEGA), of the register of livestock operations (REGA) and of the register of agricultural insurance policies managed by the State Agrarian Insurance Agency (ENESA).

The INE statistical sources used have been Agrarian Census 1999, Civil Register and CCD. The latter two sources have served to collect and improve postal addresses.

From the crossing and the filtering of all of these files, we shall obtain the directory that will allow for collecting information.

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## 8.2 USE OF ADMINISTRATIVE SOURCES

In this agrarian census, it has been necessary to adjust the demands for statistical information to the available resources. An agrarian census is costly, and needs technical resources and other types of resource, which demands the increasing reduction of the cost of the supply of statistical services. Together with the pressure to reduce costs, the INE also faces a greater and more complex demand for data.

One method to reduce the cost is the use of sampling surveys, and the use of administrative sources.

Certain variables could be obtained through administrative registers existing in the different Public Administrations. With this, while simultaneously reducing the cost, it would reduce the workload of the informant, and it would avoid asking the informant for the same information more than once. All the above would result in an improvement in the quality of the census.

The European Union Regulation itself, in article 4, foresees the use of administrative registers, so long as this guarantees the quality of the data coming from these sources. It proposes, among other things, the use of administrative sources, such as the ecological agriculture registers, the register on genetically modified crops and the specific rural development measures mentioned in section 6.28 of this project.

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## 8.3 DATA COLLECTION

The collection of information shall be carried out in three differentiated phases:

Phase 1: postal operation

Phase 2: telephone interviews

Phase 3: face-to-face interviews

Phases 2 and 3 are carried out simultaneously, and always after the first phase.

Two types of questionnaire are used to carry out these phases. One general questionnaire with those variables that are studied by census, and another sampling questionnaire with the production method variables.

All holders of agricultural operations must complete the census questionnaire. The sampling questionnaire shall only be completed by the sampling holders selected.

Phase 1: Postal operation

During this phase, census questionnaires shall be sent by ordinary post to all holders of agricultural operations. These holders may complete the paper

questionnaire and submit it by post in the pre-paid response envelope sent to them. They may also complete the questionnaire online.

Likewise, a free phone shall be available to answer any type of query, and the questionnaires received shall be scanned, recorded and filtered. In addition, we shall contact, by telephone, those informants, with a known telephone number, from whom some type of clarification or correction is required regarding the data that they have provided.

The duration of this phase is programmed in three months, from 1 October to 31 December 2009, and shall be carried out in a centralised manner.

#### Phase 2: Telephone interviews (CATI) *Computer Assisted Telephone Interview*

On 1 January 2010, the telephone interview (CATI) operation shall begin to all the holders of the first phase, for whom a telephone number is known, who have not sent the completed questionnaire.

The holders of this phase for whom a response is not obtained (either because a telephone number has not been obtained or because it has not been possible to interview them by telephone, for different reasons), shall pass to phase 3, the face-to-face interview.

The duration of this second phase is programmed in three months, from 1 January to 31 March 2010, and shall also be carried out in a centralised manner.

#### Phase 3: Face-to-face interviews (PAPI) *Paper and Pencil Interview*

Simultaneous to phase two, the face-to-face interviews shall begin of those holders for whom a telephone number is not obtained.

In addition, all of the units that are selected in the production methods survey shall be included at this time, and solely in this phase, in the data collection. Therefore, during this phase, information shall be collected with the two differentiated questionnaires, and from the Provincial Delegations of the INE, through personal visit to the homes of the holders of agricultural operations.

As the number of holders to be interviewed in this phase will be small, it is not considered necessary, as a general rule, to have an infrastructure of premises or offices in municipalities, except in the case that the size of the province or the existence of a natural or geographical region with a high density of holders, so advises. In these cases, the interviews may be carried out by appointment of the holders in the habilitated premises or offices.

During the preliminary work at the beginning of the information collection, the Provincial Delegations should:

- Agree, if it is considered necessary, on the cession or rental of premises for the location of the census personnel, and the conduction of interviews.
- Carry out the collection planning (assignation of collection times in each municipality, itineraries for conducting the Census, planning the posting of

appointment or visit letters, etc.), and assign personnel to each municipality or group of municipalities.

From the beginning of the collection of phase 3, and in different waves as determined by the Provincial Delegation, a letter shall be sent to the holders indicating the upcoming visit of an interviewer to their homes, or as may be the case, summoning them in a premises in order to conduct the interview.

In the case of interviews in premises, if the holder does not attend the first time, a second citation may be issued, or an attempt may be made to arrange a home visit. The objective shall always be to maintain an adequate rhythm of interviews that enables the completion of this collection phase of the census with total coverage, and in the established time.

Once all attempts at telephone contact with the holders of agricultural operations have been made in the CATI work centre/s, and in the cases that this does not take place, all information shall be submitted to the Provincial Delegations so that said holders may be included in the information collection of phase 3, proceeding to sent them a summons letter or a letter arranging a home visit, as applicable.

The duration of this third phase is programmed in four months, from 1 January to 30 April 2010.

As it is foreseen to externalise the operations of postal mailing and receipt of questionnaires, the process of scanning and recording the questionnaires in both collection phases, and the filtering and collection through CATI, the INE shall carry out the coordination of the cooperating bodies, for what will previously define the means of doing so, the information destined for each of the bodies, and that which each one of them shall turn in to the INE and to the rest of the bodies in each collection process stage. It shall also specify to them the means that shall be used for the follow-up and control of the tasks that each of them shall carry out, and how the information associated with these tasks shall be centralised, so that the INE may supervise and control the collection process in its different phases.

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#### 8.4 PERSONNEL THAT TAKES PART IN THE INFORMATION COLLECTION

During phases 1 and 2, the necessary personnel shall be office personnel (telephone support, validators, telephone operators, supervisors, and personnel for other auxiliary work).

During phase 3, this will depend mainly on the number of holders of operations to be interviews, but initially, there should be a hierarchical census structure allowing for carrying out the collection work by face-to-face interview with the adequate quality and within the foreseen deadline.

The basic census personnel categories for phase 3 are:

Census Agents

Group Supervisors

Regional Supervisors

The persons responsible for the census work in each one of the provinces are the Provincial Delegates and the State-Employed Qualified Statisticians of the INE in charge of phase 3 (at least one in each Provincial Delegation).

The State-Employed Qualified Statisticians shall organise the collection work of their province, performing the control and inspection of the fieldwork, analysing and confirming the census results as they are obtained.

In the cases of the existence of offices in a geographical area or region of the province, this shall be supervised by a Regional Supervisor, who shall control and oversee the correct execution of the census work. S/he shall also solve those incidences that may occur relating to the premises, personnel, qualified informants, control of coverage, etc.

The Census Agents are those persons in charge of conducting the interview with the holders of agricultural operations.

The Group Supervisors are responsible for controlling the work of the Census Agents. They shall make certain that the established work pace is followed, as well as the established pace of summons and/or visits, and they shall especially monitor those incidences detected by their agents and the correct updating of the census directory.

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## 8.5 CENSUS MATERIAL

During phase 1, the simplified questionnaires, and in the languages used in each Autonomous Community, shall be available. An explanatory leaflet shall be submitted along with the questionnaire, and a pre-paid response envelope, so that they holders may sent the completed questionnaires.

During phase 2, all of the material is integrated in the tools of the CATI work centres.

During the third phase, questionnaires on paper shall be used, that is, the same as the postal phase, as well as the sampling questionnaire to conduct the production methods survey, summons and visit letters, control and follow-up reports, census directory, etc.

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## 8.6 CENSUS ADVERTISING

An advertising campaign has been planned in support of the information collection, consistent in the publishing the explanatory posters, to be posted in those public places where they are most disseminated, and a campaign with insertions of direct advertising and journalistic articles in mass communication and radio means.

Contact shall be made with the Professional Agrarian Organisations (OPAS), Agriculture Councils, Municipal Councils and as many Organisations as may support advertising the census operations.

Explanatory leaflets shall be published to submit along with the questionnaire in phase 1 of the operation.

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## 9 Dissemination of results

The dissemination of Agrarian Census 2009 shall be carried out mainly through a Data Warehouse system, which shall be developed to order, complemented as necessary with tabulations of main results offered through INEbase.

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### 9.1 DATA WAREHOUSE

A Data Warehouse is a collection of data, orientated by subject, integrated, not volatile and organised, which enables the multidimensional analysis of large masses of data.

Among the advantages that it provides, are the great information processing power, greater flexibility and speed in accessing the information (allowing personalised queries), increase in user satisfaction, and reduction in response times and operation costs.

Its technology is based on the multidimensional model for the storage and recovery of data, and the supply of information online is oriented towards the design of personalised queries and the "surfing" by the information presented, making use of the OLAP capacities (On Line Analytical Processing).

The Agrarian Census has chronological and territorial axes that encourage the use of these multidimensional analysis techniques, going beyond the conventional techniques of tabulation and storage of the resulting tables and series. With Data Warehouse, we shall offer the users of the Agrarian Census the possibility of interacting, through the INE, with databases, carrying out information requests to order, and always respecting the statistical secrecy that is guaranteed by the application.

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### 9.2 RESULTS TABLES

Aside from the Data Warehouse, we shall offer a series of tables of main results, on a national level, by Autonomous Community and on a provincial level.

In the margin of all of the tables, the operations are classified as regards the used agricultural area.

The headings of the tables are distributed according to the following subjects:

- General distribution of the land
- Legal status of the holder and operation manager
- Tenancy regime of the land

- Herbaceous crops and fallow land, woody crops and family farms
- Mushrooms, crops of genetically modified organisms and energy crops
- Irrigable surface area
- Livestock
- Renewable energy
- Ecological agriculture
- Rural development
- Family work
- Non-family work
- Studies carried out by the operation supervisor