Abstract
The choice of food inevitably interferes on the nutritional and organic balance through the quality and the amount of certain nutrients. In addition, food contributes to the maintenance of cultural identities because food choices identify their fundamental aspects and has far-reaching implications on the availability of resources, with an inevitable impact on the fate of future generations. From this background comes the concept of “ethical food” that involves the understanding and awareness of food origin from a holistic point of view and therefore provides a useful tool to make responsible food choices. In the case of food of animal origin, this choice aims to ensure a farming animal welfare, the guarantee of human health and the environmental protection. In Europe, one of the tools to achieve this goal is the food labelling, whereby the information is clear, understandable and transparent, in accordance with specific Community rules.

The Regulation (EU) N° 1169/2011 set out the principles, the requirements and the responsibilities, to provide an accurate and understandable information about food. On April 1 2015 the Commission Regulation (EU) N° 1337/2013 entered into force, laying down additional rules for the labelling of pork, with the goal to increase transparency by providing precise information on the origin of swine products. It will be compulsory for food business operators who will indicate, on the label of the marketed meat, the place of animals’ rearing and slaughtering. In case of meat from animals born, raised and slaughtered in the same country, the place of birth will instead appear on a voluntary basis. A full and transparent information is the first step of the “right to know” way, assumed as an awareness passage to consumers able to make free but responsible choices. This option is essential for a full guarantee food policy inside the protection of free trade and can be considered a transition from a single rules legislation (food legislation) to a regulation systematic approach (food law).

Introduction
Food choices unavoidably affect the diet because of the intake and balance of essential nutrients. Foods contribute to the cultural identities too. For the production of the meat-food economic and natural resources (water, animal feed, agricultural land) are required.

This economical correlations are evident in national and international food systems, but also in households and for individuals. Interference between the people purchasing power and the market are reciprocal, but also the market proposals and consumer demands are related.

Production and sale of pork meat have been affected worldwide by these factors, particularly in recent years. In Europe, the pig system suffered from the application of the new rules on animal welfare, which reduced the number of raised animals.

On the other hand, the respect of animal welfare is now a prerequisite of scientific and practical importance for healthy and productive animals. These statements are the basis of ethics in food-producing animals and contribute to the concept of ethical food. Talking about food ethics means identifying responsibilities and ensures an operational way. To this end, a valid food policy is required.
In Europe, one of the tools used for this purpose is the food labeling, which must provide, even for the pork, clear, understandable and transparent information, according to specific Community rules. The information found on the label becomes an expression of the European community acquis, which guarantees all the stakeholders: workers, consumers and even food-producing animals.

**Materials and Methods**

The instruments of European food policy ensuring the transparency of the pork market, the regulations concerning the labelling and the rules of its application were analyzed, considering that the guarantees of food safety and animal welfare depend on this.

EU Regulation 1169/2011 set out the principles, requirements and responsibilities governing the information for a free movement of safe and wholesome food. In this paper we have evaluated its contents, especially analyzing the criteria used for the labeling of pork and related products and also considered the information recipients.

EU regulation 1337/2013 established the implementation rules of EU regulation 1169/2011 and added other details for the labelling of pork meat. In particular, it increased the transparency by stating the country of origin or provenance place. It also stated the compulsory label indication of the place of rearing and slaughtering of pigs, according to defined criteria (see box). The place of birth may be reported on a voluntary basis if the meat is coming from animals born, raised and slaughtered in the same country.

The provisions for recognition of the meat and animal origin were also sought in the two regulations. Guarantees for animal welfare and any swine specific indication have also been considered. The influence of the information on the various stakeholders was finally assessed, also to ensure consistency with the concept of ethical food.

**BOX**

Article 5 indicates that place where the animal was raised should be reported (Member State or country outside the EU). For swine, the indications depend on the age:

If the age is greater than 6 months, the country in which the last breeding period of the pig (at least 4 months) was held must be indicated.

If it is less than 6 months but with 80 kg live weight or more, the country in which the breeding after 30 kg of live weight was held must be specified.

If it is less than 6 months and with a live weight less than 80 kg the entire rearing period must be specified.

If the period of breeding has not been reached in any country “raised in several Member States” or “bred in various countries outside the EU” or “bred in various EU countries and non-EU” must be specified.

**Results and Discussion**

The indication of the country of origin is an information to which the consumer is more connected. The regulations have made it mandatory not only for beef meat but also for pork meat.

In Europe, an information tool is food labeling that provides clear, understandable and transparent evidences, in compliance with Community rules.

In EU Regulation 1169/2011 the “country of origin” of a food product is one in which it has been wholly obtained. For meat, it is the country where the animal was born, reared and slaughtered.

In case of two or more countries, it is the one where the products have undergone their last, more extensive elaboration. However, in this way consumers are not informed about the real origin of the meat.

The consumer wants precise information about the geographical area where the animal was reared (Report of the European Commission, 20 May 2015). However, if the breeding place was the same where it spent the most part of its life, the term “origin” should not be used.

The ability to understand where a food of animal origin was produced has ethical relevance, as well as knowledge of how the animal was raised and if animal welfare was considered. This information helps to build a network of transparent information throughout the supply chain, but special laws are necessary.

The two considered regulations do not contain complete information. Therefore, working for full and transparent information is essential. If an unambiguous indication of the livestock place was expected, consumers’ needs would be met and unnecessary complexity of the label would be avoided.

The improvement should be assured by a rule with suitable content, in a language understood by all and useful to all stakeholders. In this way, the labelling become informative and ethic.

**Conclusions**

Business performance of the pig system has suffered in recent years of market trends and consumer demand, and this has made difficult to apply a strategically effective food policy.

Regulation 1169/2011 defined the principles, requirements and responsibilities for consumers’ information about foods to and the executive regulation 1337/2013 established additional rules for the pork labeling. Precise indications about food origin must be provided and access to information must be more comprehensive and transparent. This is the first step in the “right to know” that allows consumers to make free and responsible choices.

If the choice is the final stage of a thoughtful and informed decision-making process, the consumer can also contribute to determine the food policy.

This allows the establishment of a legal system that is not based on the precepts (legislation), but organized on the critical awareness of operators and consumers, ensuring an ethical path of production to consumption (food law).

In this “information supply chain” the legislative function of the European Union has a key role. A labeling accessible to consumers can disseminate information on the health, organoleptic and also ethical aspects. The EU can thus have a function of formation of more professional food business operators and more conscious consumers.

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23. The Herd Health and Welfare Index as a benchmarking tool for antimicrobial resistance
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Abstract
The occurrence of antimicrobial resistant microorganisms in livestock, especially ESBL-producing Escherichia coli (E.coli), is an increasing challenge (WHO, 2001). The aim of this project is to analyse the relationship between herd health and animal welfare on the one hand, evaluated by means of a self-developed Herd Health and Welfare Index (HHWI), and on the other the frequency of the antimicrobial resistant microorganisms. The developed HHWI described in this paper includes animal- oriented and management-based parameters that can be easily assessed at farm level, resulting in an easy-to-use benchmarking tool.

Within the FP7-EU research project EFFORT, the health and welfare quality of 180 pig herds in nine participating European countries are evaluated by using the parameters of the HHWI and the occurrence of ESBL-producing E. coli in the study herds by analysing faecal samples.

Introduction
Antimicrobial resistance has been recognized as an important global health risk to humans over the last few decades (WHO, 2001, Kolár et al., 2001). As one of the typical commensals in the gut flora, Escherichia coli represents a potential reservoir of resistance genes for pathogenic bacteria. Their level of resistance is considered to be a good indicator for selection pressure by antibiotic use and for resistance problems (Murray, 1992).

The occurrence of resistant E. coli in animals, usually do not result in clinical infections, which makes it difficult to detect them without sophisticated laboratory tests. Continuous screening for ESBL- producing bacteria in animal populations is a possible, but a time-consuming and therefore expensive solution. The possibility to indirectly assess the risk of the occurrence of antimicrobial resistance by evaluating the herd health and welfare status would save time and resources and support a quick and easy method to risk-oriented in-depth testing for antimicrobial resistance.

The research project EFFORT (Ecology from Farm to Fork of microbial drug Resistance and Transmission) funded by the FP7 programme of the European Commission for Research and Innovation, was set up to achieve the goal to gain knowledge about the epidemiology and ecology of antimicrobial resistance in animals, the food chain and the environment.

The project consortium of 20 European research institutes will analyse the mechanisms of the emergence and spread of ESBL-producing E. coli strains, intending to monitor the transmission of antimicrobial resistance along the food chain.

The main objective of our contribution to EFFORT is to develop a method to benchmark the risk for the occurrence of ESBL-producing E. coli in fattening pig herds by assessing the herd health status and the animal welfare quality by using data on animal- and management-based parameters collected at farm level.