

Alternative producer-consumer relationships: the AgroGeoTrace project and the speciality products virtual roads

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Abstract—The AgroGeoTrace (AGT) project makes use of Geographical Information Systems and multi-channel information technologies to facilitate the access of final consumers to local food speciality products. The project builds a prototype of an informative system designed, first, to help consumers to understand the agronomic and technological characteristics that make the targeted products special ones, and, second, to precisely and easily locate the sites (farms and oil mills) where they can buy them. The information made available through the project is intended to the symbolic relocalization of the regional products, hence to promote them and to create added value. The final outcomes of the project are the virtual maps of on-farm shops made available on Digital television (channel In+), PDAs and mobile phones.

Keywords—food speciality products, short agro-food chains, Geographical Information Systems

I. INTRODUCTION

There are growing concerns about the separation of producers and consumers in our food system especially when the product that is offered is a quality one. Recently it has been suggested that face-to-face interaction between a seller and a buyer facilitates quality recognition by consumers and may ensure that quality is paid for [1]. This is the rationale for alternative food marketing models and food supply chains shorter than the conventional ones.

The aim of the AgroGeoTrace (AGT) project is to make use of Geographical Information Systems and multi-channel information technologies to facilitate the access of relevant parties (final consumers as well as agents of the distribution channels) to the food speciality products of the province of Teramo in the Abruzzi region. The project paid specific attention to develop a geomatic application that could help consumers not only to locate on-farm shops but also to

understand the agronomic and technological characteristics that make these products special ones.

II. THE AGT PROJECT OBJECTIVES

AGT is a sub-project of the Geomatic Regional Information Society Initiative (GRISI) Interreg Project IIC South whose objective is, among other things, the development of geomatic applications relevant for rural areas. The specific aim of the AGT project is to build a prototype of a geo-referenced data base for the geographical traceability of the food speciality products of the province of Teramo in the Abruzzi region. The concept of geographical traceability used in the project refers to the association of geographic information (coordinates of producers) with those on the quality of the product and on the farming and processing systems used to produce it.

The information made available through the project is intended to the *symbolic relocalization* [2] of the regional products, hence to create added value and to promote them.

The project moves within the framework of alternative short agro-food chains by promoting a direct relation between producers and consumers.

III. THE STAGES OF THE PROJECT

The first step of the project involved identifying the food speciality products of the province of Teramo. Two of them were then selected for developing the application: extra virgin olive oil and Abruzzi pecorino (ewe's milk) cheese. More specifically, producers of organic olive oil, organic and conventional "Pretuziano delle Colline Teramane" PDO olive oil and "Farindola Pecorino Cheese" were considered.

The next step involved the analysis of the supply chain of the two products and the development of the geo-referenced database. A survey was then conducted in order to collect data on the 41 oil producing firms (olive growers and mills) and on the 40 cheese producers identified during the study. The geographical coordinates were collected for each firm, as well as structural and technical information. The survey data were then used to feed the geo-referenced database.

The final step of the project involved transferring the data to the regional Geo-Portal, to create the virtual maps of on-farm shops and to make them available on Digital television (channel In+), PDAs and mobile phones.

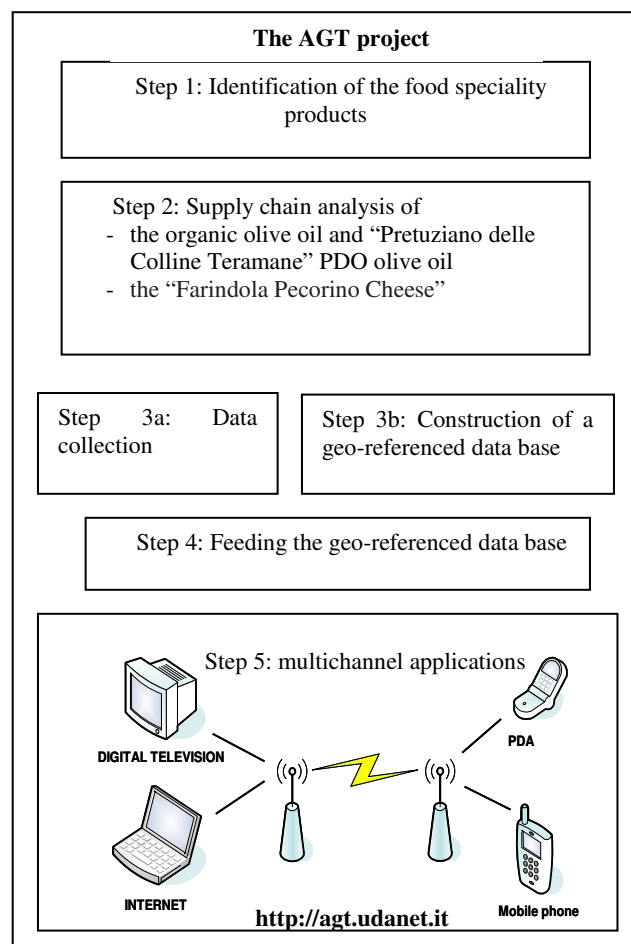


Fig. 1 The AGT project

IV. RESULTS

A. The Organic and Pretuziano oil supply chain

In the Abruzzi region, as well as in the other Southern Italian Regions, olive oil plays a leading role in the creation of the agricultural value added. Abruzzi region boasts the first Italian PDO oil (the Aprutino-Pescarese extra virgin olive oil obtained the recognition in 1996) and has now three denominations of origin.

In the province of Teramo olive crop is grown on a 6,400 hectares area with an average production of a 32,918 q. The production is very fragmented, with a relevant number of small farms (98% of the 3,777 enterprises specialised in olive production has a farm income below 9,600 Euros) and 89 oil processing enterprises.

The production of the Pretuziano PDO olive oil (the last and less widespread PDO oil of the Abruzzi region) began in 2005; the certified area accounts for 115 hectares and 19 firms (farms, processing and packaging enterprises). Only 6 out of the 22 certified organic olive oil producing farms of the Teramo province produce both organic and DPO oil.

The specificity of the Pretuziano oil depends on the use of local cultivars. In addition the disciplinary defines strict agronomic and technological production practices and the characteristics of the final product.

Differently from non certified olive oil, mainly sold in bulk to an informal -relatives and friends- network or to intermediaries, organic and/or PDO olive oil is bottled and directly sold 'on-farm' or to restaurants and retailers.

B. The Pecorino cheese supply chain

Sheep breeding is an important sector in the Abruzzi agriculture, but is very fragmented. In the province of Teramo more than 90,000 heads are bred mainly for meat production while only 30% for milk production. The main part of the produced milk is directly processed by farmers, whereas only a small part is processed by local cheese factories.

The Farindola Pecorino Cheese is a particular ewe's milk hard cheese from raw milk. Its uniqueness is due to the use of pig rennet, which gives the product its

typical aroma and taste. The sheep herds are open-air reared in local pasturelands all over the year and fed with forage and cereals found in the rearing area (in the production disciplinary only the vertical transhumance -from mountain to hill- is permitted).

The Farindola Pecorino Cheese is included in the Abruzzi Region's Atlas of traditional products [3] and is a Slow Food Presidium. The Consortium of the Farindola Pecorino producers has been created with the support of the Slow Food Association and the Gran Sasso-Laga National Park.

About 650 q/year of Farindola Pecorino cheese are produced by 50 producers (30% of which are young farmers) over two provinces (Pescara and Teramo) with an overall number of 3,600 heads (the 50% of the producers have less than 30 heads). The retail price (about 20 Euro/Kg) is higher than the average price of Pecorino. Direct on-farm selling covers 80% of total sales while the rest is usually sold to restaurants. It is note worth that the 86% of production is bought in advance before complete ripening [4].

V. CONCLUSIONS

Starting from the experience of 'wine roads' [5], this project revise and extend it in the light of novel geomatic and information technologies.

The information directly gathered through the survey as well as secondary information collected during the supply chain studies, were used to build a prototype of an informative system designed to help consumers to understand the agronomic and technological characteristics that make the target products special ones, and to precisely and easily locate the sites (farms and oil mills) where they can buy them.

The most innovative outcome of the project are virtual roads available on the geoportal and downloadable on PDAs and mobile phones.

Virtual roads are expected to benefit first of all the producers of the selected speciality food products. The information provided is intended to create added value

for the targeted products. In addition it may help to augment the current demand by improving the perception of quality in local consumers and attracting and capturing the demand of the many tourists that populate the Adriatic coast during the summer season.

Similarly to the traditional 'hard' roads, virtual roads can promote interactions with other food and non-food regional specialities and more generally with the economy of the rural area where the geo-referenced firms are located. In other words virtual roads can start a process of rural development in the area in which the geo-referenced firms are located.

An advantage of virtual roads is that they do not involve on site tangible investments and maintenance. Further, the virtual roads accompany the potential client from the very beginning of the virtual visit, on the internet or on television, till the door of the farm shop, by helping in this way the curiosity to become a concrete experience.

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