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Local productions, food traditions, nutritional status of a sample of the population living in the rural areas of the Majella Park

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Summary

Food demand, availability and consumption are related to the agro-food production and a correct eating habits, combined with healthy lifestyle, contribute in preventing diet-related chronic diseases as well as maintenance of health status. This study represents the first attempt integrating socio-economic survey conducted on a population living in rural areas of Majella National Park with nutritional aspects. The socio-economic assessment highlights differences between the studied municipalities. Two clearly distinct areas can be distinguished: the first, with a fair presence of commercial farms, the second one includes municipalities where the link with the agricultural activities has progressively lost over time and globalized production is more present. Among the municipalities with higher presence of agricultural activities, there was a supply farming system that replaces the retail businesses, giving an important contribution to fresh products distribution (meat, eggs, cured meats, vegetables). The consumption of local products is mainly determined by the knowledge of the products origin that ensures the purchase of a genuine product, with a higher quality and with better organoleptic characteristics. The supply analysis of the local population showed that the large part of consumption of food products is the one purchased through the zero-km sales channel (farms and/or kitchen gardens). However, the consumer had a limited awareness of the importance of local consumption and a very low perception of the capacity of the biodiversity in contributing both to agricultural production and economy development. Nutritional survey results showed a prevalence of overweight and obesity (77.2% of men and 69.7% of women). The results allow to hypothesize that also the rural populations are affected by the changes associated with globalization that lead to unification of the habits and preferences of consumers. Depopulation rate of the areas led to a lowering of local businesses affecting consumer' choices inevitably.

Keywords: food traditions, nutritional status, biodiversity, rural areas, eating habits
JEL Classification codes: *Q01: Sustainable Development*

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1. INTRODUCTION

Nutrition and territory are closely linked: food demand is related to the agro-food production and a correct eating habits, combined with healthy lifestyle, contributes to the prevention of many chronic diseases and to the maintenance of the health status.

Globalization, industrial development, population growth, migration flows and urbanization have extremely changed the production and consumption of food influencing not only the ecosystem, but also the food consumption, with homogenization of dietary habits and simplification of the diet, in which most of the nutrients are supplied by a small number of species cultivated and bred. Many rural areas are strongly characterized by local small productions, founded on quality and agricultural biodiversity, used at local and regional level and linked to socio-cultural traditions. This type of production represents a system based on agricultural ecotypes cultivated by techniques founded on the historical and cultural tradition of a specific territory. The presence of such productions is particularly marked in areas in which some productive ecosystems have been preserved due to the presence of parks, whose conservation policies have allowed them to maintain ancient cultures characterized by sustainable production practices.

In this context, the TERRAVITA project, financed by the Ministry of Agricultural Food and Forestry Policies, aimed at enhancing the Italian agro-food sector, particularly to the small-scale productions grown by sustainable agricultural systems together with the adoption of ancient cultivation practices, more respectful of the environments, such as national parks, regional parks, natural and mountain areas (De Janvry, 2010). The project objectives were realized by a multidisciplinary study approach including three research themes: a nutritional approach evaluating the chemical-nutritional composition of the selected foods and products as well their health potential for the consumer; a socio-economic assessment aimed at evaluating and verifying the economic sustainability of some agricultural activities and an evaluation of the energy-environmental impact of some traditional/typical production as experimental models.

In particular, the present study attempts to describe the influence of the dynamics of local trade and consumption on the maintenance of agro-food production systems, on the agricultural biodiversity, on the eating habits and health status of a population living in specific rural territory, the Majella National Park. The close relation of the local productive sector (agriculture and transformation), lifestyle and food consumption of local communities, markets and local supply chains as well as nutrition could impact on eating habits of a population living in that area.

2. DATA AND RESEARCH METHODOLOGY

By cross-referencing territorial statistical data and socio-economic characteristics of areas proposed by National Strategy Plan for Rural Development (PSN) (Art.11, EU Reg.1698/2005 a restricted area within Majella National Park was selected. Due to its extreme marginality and distance from the "globalized" commercial circuits were identified five municipalities with similar socio-economic, cultural, demographic and geographic characteristics. The study was carried out in peripheral areas potentially less "contaminated" by standardized food habits and dependent on the large-scale retail trade, where the chance to consume typical products is higher. In this area, there is an important presence of agriculture and related activities, and the production of numerous products certified PDO (Protected Designation of Origin), PGI (Protected Geographical Indication), traditional, but also of products commonly defined as "typical", of quality / tradition. These products are also not widespread, but they are present in the "collective" memory of the

locals, an unquestionable sign that they represent a factor of territorial identity. Majella National park is rich in plant varieties and in recent years there has been an increasing focus on the rediscovery and enhancement of local productive and gastronomic traditions and on actions to protect local cultivars and productions that were slowly disappearing.

The socio-economic analysis was organized in two lines of activity. The first regarding a document analysis (ARSSA, 2006, 2014; Biancatelli, 2014; INEA, 2005, 2013; Legambiente, 2008; Slowfood, 2008; Touring Club Italiano, 2015) aimed to understand the importance of local products in the diet of subjects living in the analysed areas, traditionally very linked to agriculture and to local productions, reconstructing the production system, verifying the dynamics of conservation / abandonment of consumption in favour of other products. The second to understand the consumption choices and the eating habits of the study population was carried out by two surveys aimed at defining the relationships existing between the production sector and local trade and the composition of consumer demand. For the analysis of the dynamics of the trade of local food products, a questionnaire - given to retailers of commercial establishments - aimed at surveying production activities and agro-food businesses active in the area and analysing the supply chain of foods sold locally. The questionnaires were submitted to retailers face-to-face. In particular, the analysis is based on the offer and on the related supply methods of the so-called "fresh" products, including fruit and vegetables, milk and processed meat, flour, pasta, bakery products and eggs. In total 27 agri-food products sales points were included in the survey.

Furthermore, a nutritional survey evaluated diet, lifestyle and nutritional status in a population group living in the five municipalities selected for the economic survey (198 volunteers, 61 males and 137 females, aged 18-86 years) in order to investigate the meaning of local products in people nutrition as well as globalization, particularly for those factors that determined conservation/abandon dynamics of consumption of non-local products. Data were collected by questionnaires to gather information on the health status, lifestyle and physical activity, food consumption and eating habits. Moreover, anthropometric measures and biochemical analyses are performed in order to define the nutritional status of the sample population. The methodology used has been reported elsewhere (Polito, 2018). Statistical analyses were made with StatSoft® STATISTICA 8 for Windows (StatSoft, Italia Srl). The differences between centres or between groups of different purchasing channels were analyzed by ANOVA analysis, χ^2 test, and non-parametric U-test of Mann-Whitney. For all statistical analyses a significance level of $P < 0.05$ was used.

3. DISCUSSION OF RESULTS

Among the municipalities with higher presence of agricultural activities, there was a supply farming system that replaces the retail businesses, giving an important contribution to fresh products distribution (meat, eggs, cured meats, vegetables). In addition, a consumption of local products accompanied with both regional and extra-regional (Campania and Molise regions) production, including vegetables, cheeses, meat, eggs, wine and oil, was also observed. Consequently, especially in these areas, there is a reasonable maintenance of local agricultural biodiversity (in terms of cultivars and breeding) as well as the agricultural techniques and production practices. The results of the survey on the level of awareness of food, consumption and purchase choices are very interesting. The consumption of local products is mainly determined by the knowledge of the products origin that ensures the purchase of a genuine product, with a higher quality and with better organoleptic characteristics. Additionally, the strong link between the product and the local tradition, highlights a symptom of a still deeply rooted territorial identity.

The supply analysis of the local population showed that the large part of consumption of food products is the one purchased through the zero-km sales channel (farms and/or kitchen gardens). In fact, where there is a demand and consumption of local products, there is the guarantee of maintaining and enhancing the biodiversity. However, the consumer had a limited awareness of the importance of local consumption and a very low perception of the capacity of the biodiversity in contributing both to agricultural production and economy development. It is important to underline that some local subjects have launched various actions of development, animation and communication at local level with the aim of increasing this perception. The analysis shows interesting evidence for habits and consumption of the study population. Starting from the territorial and socioeconomic characterization, the analysed municipalities are extremely differentiated: peripherally and marginality are common characteristics, but there are substantial differences in the agricultural features of the area both in consumes and purchases.

Regarding the nutritional survey, the results showed a prevalence of overweight and obesity (77.2% of men and 69.7% of women). These values are higher than literature data, due to methodological differences; in some studies, weight and height are self-reported, while in this study the anthropometric measurements were performed through standardized procedures. This high prevalence of overweight and obesity was associated with cardiovascular risk (75.5% of men and 70.0% of women) and metabolic syndrome (56.6% of men and 45.3% of women). The analysis of some risk factors mainly shows a medium adherence to the Mediterranean diet (63.8% of men and 65.7% of women), with small differences between the five municipalities examined. The average intake of fruit and vegetable is above the recommendations of 400 g/day, but a high intake of lipids, providing the 37.3% of energy, contributes to a moving away from the Mediterranean dietary pattern, which is nowadays observed in Italy (Sette, 2011). No significant differences were observed between consumers' buying habits and their nutritional status.

4. CONCLUSIONS

To our knowledge this survey represents the first attempt integrating socio-economic survey integrated with nutritional aspects conducted on a population living in an area of extreme marginality.

The socio-economic assessment highlights differences between the studied municipalities. In particular, two clearly distinct areas can be distinguished: the first, with a fair presence of commercial farms, the second one includes municipalities where the link with the agricultural activities has progressively lost over time and globalized production is more present. The results of the nutritional survey allow to hypothesize that also the rural populations are affected by the changes associated with globalization that lead to unification of the habits and preferences of consumers. Depopulation rate of the areas led to a lowering of local businesses affecting consumer' choices inevitably.

The results reinforce the need for joint actions among the different institutional actors for territorial knowledge sharing about the importance of local biodiversity protection and eating a proper nutritious diet for health and well-being maintenance. Local products can add value to rural development in sustainable areas in order to increase national and international markets supply and to improve agricultural production across whole for the territory as a whole. The spread of these products would increase the profitability and competitiveness of local producers and small and medium-sized enterprises and improve the diet and so quality of life of the local population.

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