

Geographical indications in Croatia

A case study of Virovitica pepper

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Abstract

In recent past, the geographical indication (GI) has emerged as one of the important instrument of intellectual property protection. Besides, it became an important part of agricultural policy in many countries. A geographical indication (GI) is, generally speaking, a sign used on goods with a specific geographical origin possessing qualities or a reputation stemming from that place of origin. A GI commonly consists of the name of the goods' place of origin (Bourgoing, 2003). GIs serve as a marketing tool that can add economic value to agricultural products by conveying a cultural identity using the region of origin, acknowledging the value of specific human skills and natural resources in the production process, and creating a unique identity for the products (Babcock and Clemens, 2004).

Objectives of the protection of geographical indications could be summarised in the following:

- to protect product names from misuse and imitation
- to help consumers, by giving them information concerning the specific character and the origin of the products
- to encourage diverse agricultural production and rural sustainability (Soeiro, 2005).

In 1999 Croatian Parliament passed the first Law on Geographical Indications of Products and Services. Since 2003 the protection of geographical indications and designations of origin in Croatia has been provided for under the Law on Geographical Indications and Designations of

Origin of Products and Services. According to this Law the State intellectual property office of the Republic of Croatia is the body responsible for the procedure of protection.

Since 2005 the protection of geographical indications and designations of origin of agricultural products and foodstuff in Croatia has been regulated in accordance with the EU Regulations No 2081/92. Therefore, Croatian law allows protecting food products with protected denomination of origin (PDO) and protected geographical indication (PGI) denominations equivalent to those in the EU. The body responsible for the procedure of this protection became Ministry of Agriculture, Fisheries and Water Management.

Only nine agricultural and food product were protected with geographical indications according to the Law from 2003. However, these products have to renew their protection according to new regulations. So far, none of the products asked for the protection consistent with the new Regulations.

Tomato shaped pepper produced in the Virovitica region is one of the first products preparing to ask protection in accordance with the new Regulation. Therefore, a project aiming to help preparing the whole procedure of registration has been initiated.

Tomato shaped pepper from the Virovitica region is a well known product in Croatia. It has been produced for the market consumption in the last 40 to 50 years. This pepper is used for the fresh consumption, for pickling and for stuffing. The specificity of this pepper comes from the agro-pedological conditions of the region.

In this paper the results of the survey carried out with pepper producers from the Virovitica region are presented. The actual situation in the pepper production and distribution is specified. Producers' attitudes and knowledge about protected geographical indication as well as their expectations regarding future protection are described in the paper.

Some pepper producers are members of the regional Association of the vegetable producers, whilst significant numbers of them are not members of any producers association. Most of the present farmers produce pepper for the market sale in the last 10 to 20 years. For the majority of the surveyed producers this pepper accounts to 20 to 50% of all marketable production of their farms. Currently, pepper is mostly sold in wholesale markets or to the pepper distributors and processors.

About 70% of the surveyed producers are familiar to some extent with the concept and regulations about protected geographical indications. However, only 13% are fully familiar with this concept.

The majority of the producers are willing to participate in the production of pepper protected with geographical indication. They expect to achieve higher selling price and to improve the marketability of the pepper through the protection.

However, about 40% of the surveyed producers are not sure if they would participate in the costs connected with protection registration and future control of the pepper.

The results of the described producers' survey, together with consumer survey will be used in the process of protection of geographical indications as well as for defining marketing program for tomato shaped pepper in the Virovitica region.

1. Introduction

In recent past, the geographical indication (GI) has emerged as one of the important instrument of intellectual property protection. Besides, it became an important part of agricultural policy in many countries.

A geographical indication (GI) is, generally speaking, a sign used on goods with a specific geographical origin possessing qualities or a reputation stemming from that place of origin. A GI commonly consists of the name of the goods' place of origin (Bourgoing, 2003).

GIs may be used for a wide variety of agricultural products, such as “Tuscany” for olive oil produced in a specific area of Italy, “Roquefort Cheese” produced in France, "Darjeeling" tea from India, "Jasmine" rice produced in Thailand or Guatemala's "Antigua" coffee.

GIs serve as a marketing tool that can add economic value to agricultural products by conveying a cultural identity using the region of origin, acknowledging the value of specific human skills and natural resources in the production process, and creating a unique identity for the products (Babcock and Clemens, 2004).

Objectives of the protection of geographical indications could be summarised in the following:

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- to help consumers, by giving them information concerning the specific character and the origin of the products
- to encourage diverse agricultural production and rural sustainability (Soeiro, 2005).

2. Geographical Indications: A Historical Perspective

The use of GIs appears to date back as far as pre-Biblical times, as has been learned from the discovery of records indicating the existence of Naxos Wines and Sicilian Honeys in the fourth century B.C., followed by Iberian Ham in Caesar Augustus' era, and later the Bordeaux Wines, Provoke Olive Oils and Russian Leather of the 18th century (Bourgoing, 2003).

Governments have been protecting trade names and trademarks used in relation to food products identified with a particular region since at least the end of the nineteenth century, using laws against false trade descriptions or passing off, which generally protect against suggestions that a product has a certain origin, quality or association when it does not.

There are a number of international conventions which have attempted to regulate the protection of geographical indications (Barjolle & Sylvander, 2000).

The Paris Convention for the protection of industrial property, established in 1883, was the first multilateral agreement concerning protected designations and geographical indications.

The Madrid Agreement (1891) signed by 31 countries established a protection against fraudulent and misleading indications of provenance. The mechanism for protection is based on confiscation by customs of imported goods. This agreement has two weak points. Firstly the signatories do not include either the North American or New World countries. Secondly, the abusive use of indications of provenance accompanied by such terms as "type" or "kind" is allowed if the true origin is also indicated.

The GATT¹ Agreement of 1947 laid down express rules for the protection of appellations of origin, consistent with its goal of eliminating protectionist obstacles.

The Stresa Convention (1951) signed by 8 countries, concerns a limited number of protected designations of origin and denominations of cheese. The Stresa Convention applies specifically to cheeses. It concerns the use of designations of origin and the names of cheeses. The signatory countries committed themselves to prohibiting the use of the false designations of origin on their territory and to take all necessary measures to ensure the application of the Convention. The scope of protection is greater than that offered by the Madrid Settlement since it prohibits the use of terms like "type" or "kind".

The Lisbon Agreement (1958) for the Protection of Appellations of Origin and Their International Registrations became the first major multinational treaty to address and provide a registration system for GIs (Bourgoing, 2003). Few countries joined the Lisbon agreement,

¹ General Agreement on Tariffs and Trade

however: by 1997 there were only 17 members (Algeria, Bulgaria, Burkina Faso, Congo, Cuba, Czech Republic, France, Gabon, Haiti, Hungary, Israel, Italy, Mexico, Portugal, Slovakia, Togo, Tunisia). Appellations of origin are registered initially with their country of origin and then with the World Intellectual Property Organisation (WIPO) in Geneva. The registered names are thereby protected against imitation including products marketed using terms like "type", "kind" or "style" etc. The protection is wide-ranging and accompanied by a strict definition of a protected designation of origin. About 170 geographical indications were registered by Lisbon Agreement members as of 1997.

The Olive Oil Agreement signed 1963 by 13 olive oil producing countries intends to ensure fair competition between olive oil exporting countries, whether producers or not, and to guarantee importing countries a supply that conforms with the terms of agreed contracts.

From a wider international point of view, protection of geographical indications was established in the Uruguay Round of the General Agreement on Tariffs and Trade now administered by the WTO. The specific regulations concerning GIs are addressed in the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

TRIPS, signed on January 1, 1995 and ratified by 135 states provides minimum standards for the protection of certain intellectual property types and the enforcement of intellectual property rights. Among the types of intellectual property protected by TRIPS are names of particular food products associated with specific geographic places ("Food Geographic Indications").

The TRIPS Agreement, is the most wide reaching treaty on this issue, with Articles 22 and 23 dealing specifically with the protection of geographical indications.

Article 22 of the TRIPS Agreement defines GIs as follows: *Geographical indications are, for the purposes of this Agreement, indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation, or other characteristic of the good is essentially attributable to its geographical origin* (WTO 1994).

Since the signing of the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement and the incorporation of GI provisions therein, GIs have become widely acknowledged and accepted. This progression of the protection of GIs benefit trademark owners, the relevant countries and consumers because it encourages investment and guards against confusion.

In the TRIPS agreements geographical indications got a place in an agreement on the protection of intellectual property that is clearly distinct from that of trademarks (Barjolle & Sylvander, 2000).

Apart from the multilateral agreements, there have also been a number of local-area international agreements providing for, amongst other things, the protection of geographical indications including the following Stern (2004):

- The Interamerican Convention on the Protection of Marks of 1929
- The Treaty of Rome of 1957 which established the EEC (later European Community)
- The Central American Convention for the Protection of Industrial Property 1968
- The Carthage Agreement of 26 May 1969
- The African Intellectual Property Organization established in 1977.

Several bilateral agreements include the protection of geographical indications, such as the agreements between:

- France and Italy of 1964
- France and Spain of 1973
- France and Switzerland of 1974
- France and Austria of 1975
- The EU and Australia of 1994
- The EU and South Africa of 1999.

3. GIs as promoters of rural development

GIs may benefit producers and local communities where specific know-how and resources have been preserved, no matter where they live, be they inhabitants of developing or developed countries, as well as consumers. In that respect, GIs may help promoting rural development.

Studies have shown that when the name of a product obtains a protection as a geographical indication, there is a positive socio-economic impact on local communities. The geographical indications:

- increase production, create local jobs and prevent rural exodus
- help producers to obtain a premium price for their products in exchange for guarantees offered to consumers on production methods and quality
- allow for a better redistribution of the added value in the production chain
- bring value to the land of origin
- have other indirect positive effects, such as on tourism (O'Connor and Company, 2005).

GIs are being increasingly considered as part of a wider policy measure aimed at protecting and rewarding indigenous peoples' knowledge (Rangnekar, 2004) and natural resources.

They:

- encourage the preservation of biodiversity, local know-how and natural resources;
- prevent the standardisation of food;
- ensure that producers can offer consumers unique and different products.

Besides, GIs are an important part of the culture, since they:

- contribute to social cohesion as they can help local producers to work together and solve common problems;
- play a positive role in raising local and national identity by making producers and consumers proud of their unique traditional products;
- have other positive indirect effects, for example on tourism.

According to Lamy (2003) geographical indications are a tool for development of quality in agriculture in the EU because of five reasons:

- The use of geographical indications is an effective instrument for organisation of the countryside and of professionals. The production and processing of agricultural and agri-food products according to exacting know-how maintains a qualified population in rural areas. It reinforces the economic fabric through the presence of

additional industries. It is a rural development instrument which has had tangible success in Europe.

- Geographical indications are a wealth multiplier. It is a collective right which belongs to communities.
- They encourage a more balanced distribution of added value between producers and distributors and between different countries.
- Geographical indications stimulate quality and consequently strengthen competitiveness. Competition between similar products causes a permanent adjustment of all the producers, and first the producers of geographical indications, to raise the quality of their products. That requires in particular that each member of the community implements the improvements adopted collectively
- They contribute to the identity of the heritage of the EU countries and regions. Travelling throughout the world, such products contribute to the image and prestige of their countries of origin, and allow their producers, from wherever they be, to have greater presence on the international scene.

4. Geographic indications and European food labels

Traditional and typical agri-food products are an important resource for agricultural and rural development in many areas of the European Union: these products have strong ties with their area of origin and their name very often coincides with that of a specific geographical area.

"Quality agricultural products are assuming an increasingly important role in the European Union agricultural and food policies. The potential for differentiating quality products and services on a regional basis has been recognised and legislation has been introduced for protecting the geographical indications and designations of origin for agricultural products and quality foodstuffs" (Skuras & Vakrou, 2002).

Geographical indications in Europe have traditionally been rooted in protection for wines and spirits, and have been developed for other products only later. Naimly, through EC Regulation 2081/92, two legal instruments for protection (PDOs and PGIs) were introducing in 1992. The aim was to promote the concept of regionally produced products that include the characteristics of quality, tradition and ancient production methods.

According to this Regulation:

- protected designation of origin (PDO) is the name of a region, specific place or country referring to a product originating in that region, specific place or country and whose quality or other characteristics are essentially or exclusively due to a particular geographical environment.
- protected geographical indication (PGI) is the name of a region, specific place or country describing a product originating in that region, specific place or country and possessing a quality or reputation which may be attributed to the geographical environment with its inherent natural and/or human components;

The difference between PDO and PGI is that in order to obtain recognition of the former, all stages of production and processing of the commodity concerned must take place in a specific geographical area, whereas for the latter, it is sufficient that the quality or reputation of the commodity can be attributed to its geographical origin, while part of the production process is allowed to take place outside the area.

To further promote the idea of quality products the Commission developed an EU wide label for the inspected characteristics of quality to distinguish them from similar standard products (European Commission, 1996). This label was launched in 1998, is applicable in all 15 EU member states and assists consumers' purchasing decisions and safeguards the interests of the producers who have registered their products into the certification scheme covering all previously mentioned product types. The PDO and PGI labels can apply for nearly all types of agricultural products, except for wines and spirits.



Protected Designation
of Origin (PDO)



Protected Geographical
Indication (PGI)

To qualify for a PGI or PDO designation, a product must comply with a specification containing the following: the name and description of the product; the definition of the geographical area; the methods of preparation; factors relating to the geographic environment; the inspection bodies; details of labelling and any legislative requirements that must be met. The type of link between the product and the geographical location is more stringent in the case of the PDO designation, the quality or other characteristics being due essentially or exclusively to its geographical environment.

The objectives of the EU regulation 2081/92 can be classified according to three categories (Barjolle & Sylvander, 2000):

- A. An agricultural and rural policy objective which can be broken down into three sub-objectives:
 - A1. Encourage the diversification of agricultural production (agricultural policy)
 - A2. Achieve a better balance between supply and demand (market policy)
 - A3. Promote the value of products for the development of remote or less-favoured regions, with the secondary aim of stabilising populations and improving farm incomes (rural development policy)
- B. A competition policy objective:
 - B1. Guarantee equal competition between the producers of products benefiting from these designations
- C. A consumer policy objective with two sub-objectives:
 - C1. Clarity (“consumers must, in order to be able to make the best choice, be given clear and succinct information regarding the origin of the product”)
 - C2. Credibility (“to enhance the credibility of these products in the eyes of the consumers”)

The introduction of a quality product policy as this envisaged with the PDO-PGI scheme has been designed as a diversification strategy to the already saturated agricultural product markets of the EU member states. Support for regional quality products constitute the main pillar of the EU’s quality policy on agricultural products and is directly linked to rural development. Thus considerable efforts have been made in this direction, which have been mainly initiated through the LEADER II (1994-1999) program and will continue with LEADER+ (LEADER, 2000) (Skuras & Vakrou, 2002).

The European Communities have registered some 4900 geographical indications (4200 for wines and spirits; 700 for other products). According to the data published in 2004, France's GIs generated 19 billion euro of value (16 billion wines & spirits and 3 billion other products) and constitute the lifeline of 138 000 agricultural outfits. Similarly, Italy's GIs generated a value of 12 billion euro (5 billion euro for wines & spirits and 7 billion for other products) and give employment to more than 300.000 citizens. In Spain, GI products generated some 3.5 billion euro of income (2.8 billion for wines and spirits and 0.7 billion euro for other products) (EU Background Note 01/04 - 2004/02/10).

It is interesting to notice that the majority of EU Reg. 2081/92 registrations concern France and the Mediterranean countries. This is most probably due to the different approach to food and food quality between Northern and Southern countries of Europe. In addition, the registered PDO/PGI products reflect the agricultural specialisation of the country concerned: i.e. Italy's registered products are mainly different cheeses, processed meats (salami, ham, sausages, etc.) and olives and olive oils, the majority of PDO beers are from Germany, cheese from France. Portugal, France, Spain and Greece have high numbers of PDO products (Wilson & Fearn, 2000).

5. GIs: a market access tool

GIs can bring an added value to the products that are labelled as such and thereby ensure them better market access worldwide. They:

- encourage variety and diversity of production;
- allow producers to market differentiated products with specific characteristics that are clearly identifiable.

As Moran (1993) states: "Geographical indications are much more than the identification of a product with a place. As a type of intellectual property, that is attached to territory, they are a means for the social and industrial groups with rights to them to protect and distinguish their products. Small local producers are able to use them to enhance their reputations, and to sell directly to final demand, thus competing more effectively against large corporations".

Geographical identities can afford producers “brand name” equity and protection usually not available to commodity products. With GI protection, producers are able to command premiums for their products, especially if perceived and/or actual quality differences exist, including product differences attributable to their unique geographical as opposed to varietal origins (Agarwal & Barone, 2005).

The task of defining an GIs, setting out its product specifications, is considered fundamental to wider strategies of product differentiation and creation of market segments so as to earn a premium on price (Rangnekar, 2004).

Today, marketing strategies for quality products attempt to explore these new opportunities, trying to build on the products' reputation and the image of their region of origin (Skuras & Vakrou, 2002).

GI-based branding strategies as a form of market protection and promotion have long been available to wines and spirits in the European Union (Babcock, 2003) with examples including Scotch, Champagne, and Cognac.

Demand for original labelled products

Consumers' fears, triggered by a series of high profile food safety incidents in the last decades (salmonella, BSE, E.Coli O157, foot and mouth disease) and technological developments such as GMOs, have been translated into serious concern about food safety, and ever-increasing demands for quality assurance and information about the way of food production and product origin.

Additionally, in the context of globalised markets, consumers are increasingly looking for unique quality products with a specific origin.

The increasing demand for high quality and high status products and a desire for cultural identification have created a growing market for value-added products that carry a strong identification with a particular geographic region.

As a result a significant number of consumers in industrial world show preferences towards products from their own region (see Alvensleben, 2001) or products with the known origin.

Geographical indications have a very important role as far as consumers are concerned: they protect them against deception and ensure that they get the product they are looking for, rather than a low quality imitation or blend (Vandoren, 2004).

Products bearing a geographical indication carry a strong added value. Geographical indication is perceived to be an indicator of origin and quality, for which the consumer is willing to pay a premium. EU consumers highly appreciate GIs as demonstrated by a 1999 consumers survey indicating that, generally, 40% of consumers are ready to pay a 10% premium price for origin-guaranteed products (EU Background Note 01/04 - 2004/02/10).

The average French cheese with a geographical indication (GI) sells at an extra 3 euro per kg compared to a non-GI French cheese. Toscano olive oil increased its price by 10% since its recognition as a GI in the EU. Jamao coffee from the Dominican Republic has seen its price/lb rise from US\$ 67 to US\$ 107 since it has been registered as a GI (Vandoren, 2004). Many of these products whose names are protected, are exported. 85% of French wine exports use GIs. 80% of EU exported spirits use GIs.

6. Croatian case study

Croatia has many fresh and processed food products (fruit and vegetables, meat products, dairy products, honey, cakes...) which specificities origin from the region and /or tradition of their production. The production and marketing of significant number of such products is not well organised and there are only a few producers' organisations and associations dealing with the distribution of traditional products.

6.1. Legal protection of origin designation

In 1999 Croatian Parliament passed the first Law on Geographical Indications of Products and Services.

Since 2003 the protection of geographical indications and designations of origin in Croatia has been provided for under the Law on Geographical Indications and Designations of Origin of Products and Services. According to this Law the State intellectual property office of the Republic of Croatia is the body responsible for the procedure of protection. Other two laws regulating products protection are the Law on Foodstuffs and Law on Wine both in effect since 2003.

The protection of geographical indications as intellectual property shall be granted using the relevant registration procedure for indications. In addition to defining the geographical environment to which it refers, the request for the registration has to include the detailed description of the specific quality and characteristics resulting from the designated origin.

In 2005 the Regulation on designations of origin and geographical indications for food (NN80/05) was adopted. The EU regulations were used as a basis for creating this set of regulations. Therefore, Croatian law allows protecting food products with PDO and PGI denominations equivalent to those in the EU.

After the implementation of the Regulation the proceedings on the protection of geographical indications and designations of origin for foodstuffs (food) and wine is carried out by the Ministry of Agriculture, Forestry and Water Management in compliance with the Law on Foodstuffs and Law on Wine and respective positive regulations.

The State Intellectual Property Office of the Republic of Croatia is competent to carry out the procedures of other products and services in compliance with the Law on Geographical Indications and Designations of Origin of Products and Services and Regulations on Geographical Indications and Designations of Origin of Products and Services.

Only nine agricultural and food product were protected with geographical indications according to the Law from 2003. However, these products have to renew their protection according to new regulations. So far, no protection consistent with the new Regulations has been requested.

6.2. Case study - Virovitica pepper

Tomato shaped pepper produced in the Virovitica region (eastern part of Croatia) is one of the first products being prepared to receive the protection in accordance with the new Regulation. The Virovitica-Podravina County together with the regional Association of the vegetable producers started a project "the Protection of Virovitica pepper with the protected geographical indication" aiming to help preparing the whole procedure of product registration.

A small number of pepper producers in Virovitica region are members of the mentioned regional Association of the vegetable producers, whilst a significant numbers of them are not members of any producers association.

6.2.1. Product description

Tomato shaped pepper from the Virovitica region is a well known product in Croatia. This pepper is produced in a wider Virovitica region and is regarded as having excellent quality.

The production of tomato shaped pepper in Virovitica region started some years after World War II. The organised purchase of pepper by state owned cooperatives started at the beginning of 60's.

Tomato shaped pepper is used for fresh consumption, for pickling and for stuffing. The pepper has specific, intense smell and sharp taste. Because of such taste which did not suit the processing industry, at the end of 80's a team of experts selected a seed of this pepper which was more appropriate for the processing. This seed was listed in the national list of registered seeds. However, farmers continued to use their own seeds in the production and now it is hard to find registered seed in the market.

The quality of tomato shaped pepper from the Virovitica region arises from the agro-pedological conditions of the region where it is grown. Because of the high level of underground water in this area there is no need for irrigation. The soil structure in the region is very favourable for the production of this type of pepper. The agro-climate conditions make the pepper produced in Virovitica region of excellent quality.

There are no exact data on tomato shaped pepper production. A part of this production is sold directly to the end consumers and this production is not registered at all. Other part of the production is sold to wholesalers and processors.

6.2.2. The conducted research

Methodology

In order to collect the data on the actual situation in the pepper production and distribution as well as producers' attitudes and knowledge about certified procedures several researches were conducted.

At the beginning a personal interview with three pepper producers was carried out. The goal of this interview was to collect general information about pepper production and specificities of the final product.

Following the results of the interview an extensive questionnaire for pepper producers was created. The questionnaire consisted of 65 questions divided into several groups: general information about farm, questions about pepper production including technology, questions about pepper distribution and sale, producers' satisfaction with the buyers (wholesalers), main problems in the pepper business, knowledge and attitudes towards protection of geographical identification and farmers' demographics.

In this paper only the main characteristics of pepper production, producers' attitudes and knowledge about protected geographical indication and their expectations regarding future protection of pepper are described.

A survey was carried out into two phases. In April 2006, 19 pepper producers, members of the regional Association of the vegetable producers were interviewed. The face to face survey was made with the whole group of producers at the same time. In May 2006, the same questionnaire was distributed by post to additional 208 pepper producers. The names and addresses of the producers were obtained from the regional pepper wholesalers and

processors. A mail survey is a kind of survey especially suitable for extensive research. Respondents could be more willing to answer on personal or family questions in a mail survey compared with other kind of surveys, since in a mail survey they can stay anonymous (PERREAULT & MCCARTHY, 1996). The big disadvantage of a mail survey is a small respondent rate and sample representative quality (MARUŠIĆ & VRANEŠEVIĆ, 1997). However, a mail survey is the cheapest survey method and an adequate response rate can provide reliable results (DIBB et al., 1991).

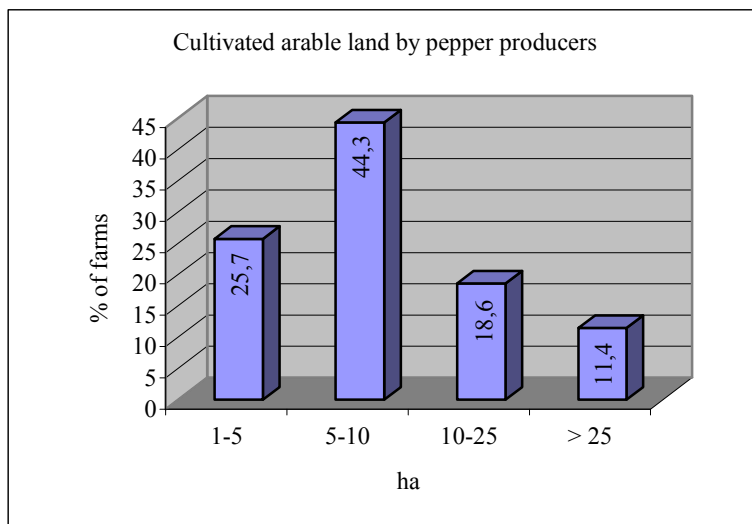
From the total number of questionnaires distributed by post, 29% that is 60 questionnaires were returned. Several returned questionnaires had some missing answers, but we included in this analysis all the questionnaires that have the majority of questions answered regarding the subject of this paper. All together, we analysed 79 questionnaires.

Research results

Farms description

More than 80% of all interviewed farms have a farming tradition longer than 10 years. About 15% of the farms were founded in the last 10 years, while 3 farms had a break in their production in the recent period.

Graph 1 Cultivated arable land by pepper producers



One fourth of the respondents cultivate less than 5 ha of arable land, further 44% cultivate 5 to 10 ha, and about 20% of producers cultivate 10 to 25 ha. 11% of farms use more than 25 ha in their overall agricultural production.

The average farmers' age is 46 years. About 10% of the surveyed farmers are younger than 30, further 18% are between 30 and 40 years old. The biggest age group form the farmers between 41 and 50 years old (40% of the respondents) while 31% of the respondents are older than 50 years.

Only 3 surveyed farmers have university education, similar number of the farmers have finished primary of secondary school (44.9 % and 47.8% respectively) and 2 farmers have no formal education at all.

Table 1 Farmers' age

Farmers age	% of respondents
< 30 years	9.7
30-40 years	18.1
41-50 years	40.3
51-60 years	25.0
> 60 years	6.9

Table 2 Farmers' education

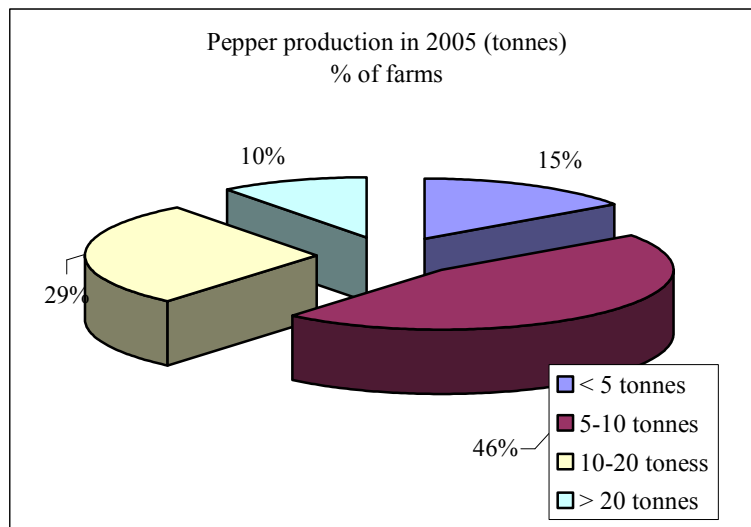
Farmers education	% of respondents
no formal education	2.9
primary school	44.9
secondary school	47.8
university education	4.3

Tomato shaped pepper production

The pepper production has a long tradition among surveyed farmers; about 50% of farms have a tradition of pepper production longer than 20 years. However, for more than half of the producers the pepper production amounts to 30% or less in the whole farm sale.

The majority of farmers (46%) produce between 5 and 10 tonnes of tomato shaped pepper. Only 10% of surveyed farmers produce more than 20 tonnes of Virovitica pepper.

Graph 2 Tomato shaped pepper production



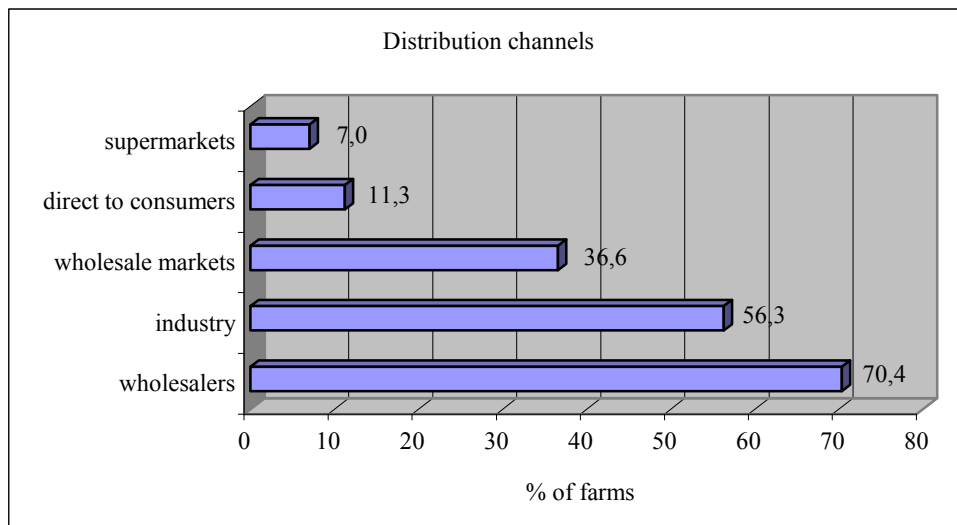
About 7% of all producers reduced the pepper production in the last three years. 47% of the producers increased the production and the similar number of respondents (46%) kept the same level of pepper production in the last three years.

The prospect for the production of Virovitica pepper is very optimistic. Even 48% of producers plan to increase the pepper production in the next years, half of them will keep the same level of production while only 1 producer claimed that he will reduce his pepper production in the future years.

Tomato shaped pepper sale

The majority of pepper producers in the Virovitica region use more than one selling channel. Most pepper producers (70%) sell their product to wholesalers. The majority of the wholesalers are placed in the Virovitica region and they supply producers with all inputs necessary for the pepper production. Furthermore, processing industry is also a very popular selling channel; namely, more than half of surveyed farmers sell their pepper to the industry. Some producers (36%) sell their products including tomato shaped pepper in the wholesale markets mainly in Zagreb, capital of Croatia. Some producers sell pepper directly to the end consumers (11%) or to supermarkets (7%).

Graph 3 Main distribution channels for tomato shaped pepper



Compared to some other vegetable products, producers of tomato shaped pepper do not have problems with the pepper sale. However, the selling price they obtained is not very satisfying for them. The satisfaction with the sale price was measured on a 5 point Liker scale where 1 meant not satisfied at all and 5 very satisfied. The average satisfaction of the surveyed farmers amounted to only 2.39. One fourth of the farmers are not satisfied at all and only 11% of the respondents claimed to be satisfied with the selling price. None of the farmers is very satisfied with the average selling price they obtain for the tomato shaped pepper.

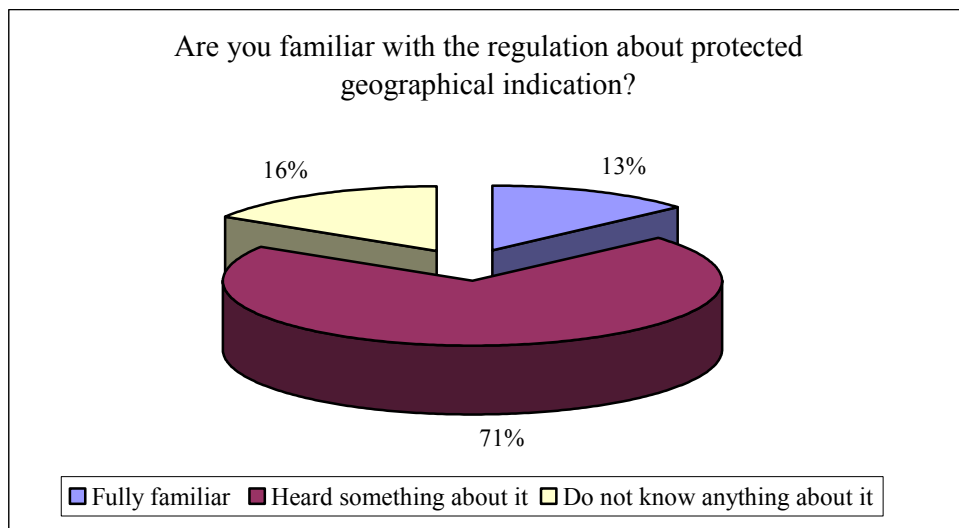
There is a rather high willingness among surveyed farmers to participate in a cooperative sale with other pepper producers. 35% of farmers are very willing and additional 35% are willing to cooperate with others. About 30% of farmers are not sure if they would or would not cooperate with others farmers while only one respondent said not to be willing to participate in the joint sale.

Protected geographical indication and farmers' attitudes

The mentioned project "Protection of Virovitica pepper with protected geographical indication" started few months before the survey had been carried out. There has been quite good promotion of the project in the local media and through the Cooperatives of the

vegetable producers. Therefore, the familiarity of the farmers with the protected geographical indication is rather high taking into account relatively new regulation and non existence of any protected product in Croatia so far. Namely, 13% of the producers claimed to be very familiar with the new regulation and further 71% said that they already heard about protected geographical indication. 16% of the respondents had no knowledge about the regulation regarding protected geographical indication.

Graph 4 Producers' familiarity with the GIs regulation

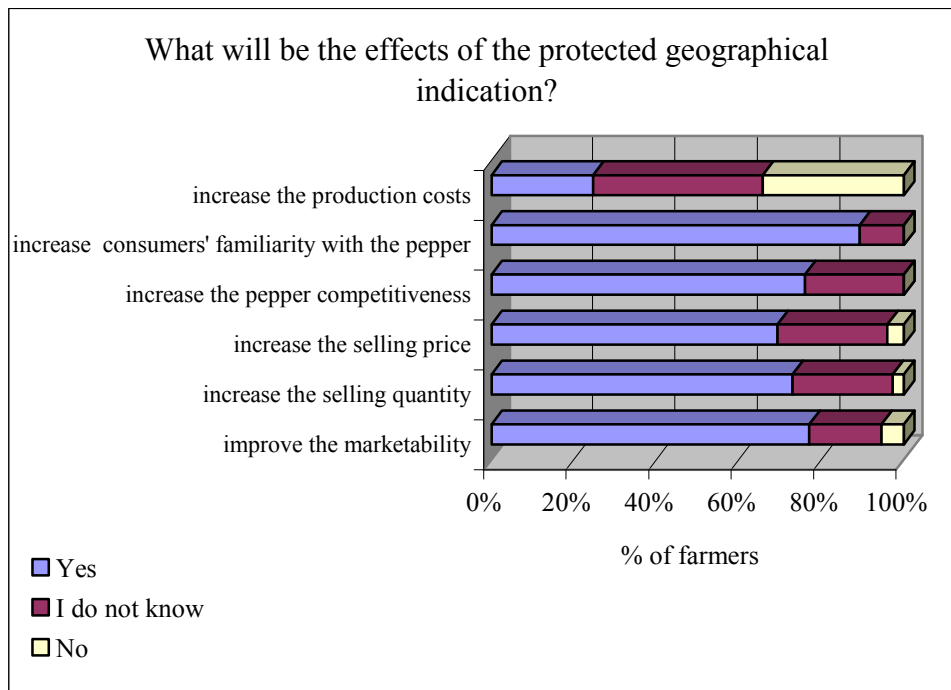


Open ended question was used to explore farmers' expectations regarding potential protection of geographical indication of the tomato shaped pepper. Most of the respondents expect better selling price of the pepper (about 45% of the farmers) and easier sale (40%; even though the majority of the farmers claimed not to have problems with the pepper sale). The only other mentioned advantage of the protection regards better recognition of the Virovitica pepper in the market, but this advantage was mentioned by only 3 producers.

Farmers were asked to express their opinion on the possible impact of the protection of geographical indication on the sale, selling price, competitiveness and production costs of tomato shaped pepper. A good number of farmers (more than 70%) believed that the pepper protection will improve the marketability of the Virovitica pepper and increase the selling quantity and the selling price. Also, the majority of respondents suppose that this protection could help to increase the consumers' familiarity with the tomato shaped pepper

from the Virovitica region and to increase the competitiveness of this product in the market. Only one third of the surveyed farmers believe that the protection of geographical indication will increase the production costs, while the majority (41%) is not sure if such protection would have any influence on the production costs.

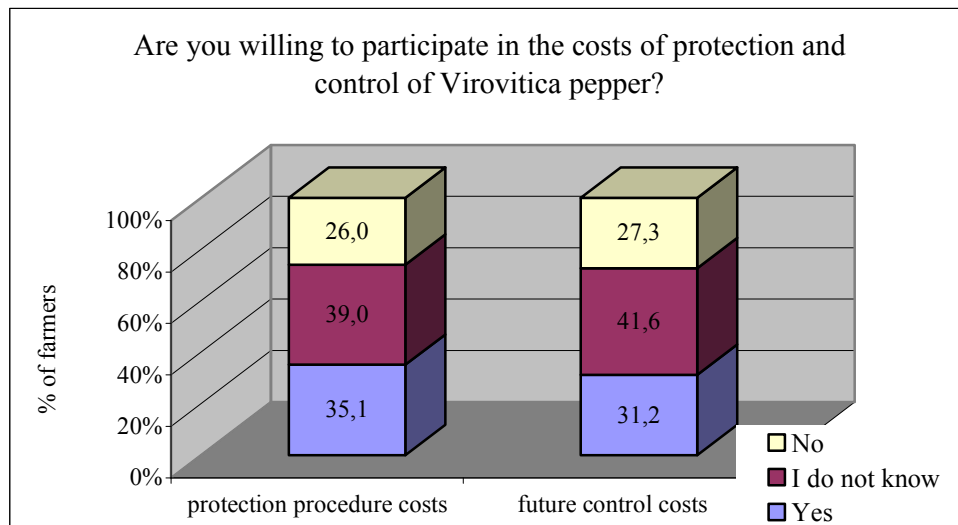
Graph 5 Expected effects of the protected geographical indication



Almost all producers (93%) are willing to participate in the production of pepper protected with geographical indication. A few producers said not to be sure if they would participate in such production while none of the respondents claimed not to be interested in it at all.

However, about 25% of the farmers are not willing to participate in the costs connected with protection registration procedure and future control of the Virovitica pepper.

Graph 6 Producers' willingness to participate in the costs of protection



Chi-square and univariate analysis of variance (ANOVA) showed that nor farm's characteristics nor age or education of the farmers influence the knowledge about protected geographical indication and attitudes of the farmers towards such protection of tomato shaped pepper from Virovitica region.

7. Discussion and conclusion

Since 2005 the protection of geographical indications and designations of origin of agricultural products and foodstuff in Croatia has been regulated in accordance with the EU Regulations No 2081/92. Despite the rather high number of food products that could be protected with the denomination of origin or protected geographical indication there are no products in Croatia protected in accordance with the new regulation.

The Virovitica-Podravina County together with the county's vegetables producers cooperative started a project aiming to protect the Virovitica pepper with the protected geographical indication. Within this project was conducted the survey with pepper producers regarding their knowledge and attitudes towards geographical protection.

The survey showed that Virovitica pepper is produced mostly on farms with a farming tradition older than 10 years. The pepper production is usually secondary production for the majority of the producers, and the average production per farms does not exceed 10 tonnes.

Most of the pepper producers claimed not to have significant problems with the sale of the tomato shaped pepper. The pepper is predominantly sold to the wholesalers and processors, but farmers usually utilize more than one selling channel. However, the pepper producers are not very satisfied with the selling prices and the terms of payment.

The surveyed farmers are rather familiar with the regulation regarding geographical protection and they are mostly familiar with the intention to protect the tomato shaped pepper. Producers expect to obtain better selling price and to increase the marketability of their pepper. Therefore, they are very willing to participate in the production of the pepper with protected geographical indication and to follow the production and product standards set up by the future internal regulation. However, when it comes to the costs of the protection, regardless if it concerns costs of the process of registration or future control of the production and final product farmers are significantly less willing to participate in it.

The results of the presented survey showed that Croatian farmers, especially those producing products with potential protection of GI, are aware of the benefits that protection of geographical indication could bring to the producers. Therefore, they are willing to take part in such production. However, they are still not aware of all the consequences that such protection requires, especially concerning control of the production and final products.

The result of the survey with the Virovitica pepper producers will be used as a basis to define pepper production and product that will be protected with the geographical identification. The way of production as well as production terms will be defined. Farmers' attitudes and knowledge will be taken into account when deciding about the organisational structure of the pepper production.

The results of the described producers' survey, together with consumer survey will be used in the process of protection of geographical indications as well as for defining marketing program for tomato shaped pepper in the Virovitica region.

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