

Revitalization Analysis and Recommendations for the Drniš Pršut Industry



Submitted by:



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ATTACHMENTS

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1. Executive Summary

FLAG International LLC (FI), sponsored by Mercy Corps and the United States Agency for International Development (USAID), has conducted, at the request of municipal officials, an analysis of the pršut industry in the municipality of Drniš. This analysis evaluates the present state of pršut production in the area and assesses the feasibility of revitalizing pršut production to its pre-war level in an ecologically sustainable fashion. The analysis identifies existing market constraints that have hampered the development of the industry, and describes measures necessary to raise production and profitability levels, which will in turn increase employment in the area.

In the course of this analysis, FI surveyed the overall market environment, as well as specific facilities representing the vast majority of all pršut production in or near the Drniš municipality. Included within the survey are extensive details about existing capacities and production levels, manufacturing processes, product mixes, distribution channels, input costs, credit obligations, and market information.

Prior to the recent conflict, hundreds of people were employed in the Drniš area as pig producers or in pršut drying facilities that provided significant income to municipality residents. At that time, approximately 350,000 pieces of pršut were produced throughout Croatia, of which an overwhelming plurality of 74,000 pršut was produced in Drniš by the former socially owned enterprise “Mesopromet.” This facility, along with the pig farm that supplied the facility with raw materials, was destroyed during the conflict and is currently abandoned.

Today, the industry is dominated by roughly a dozen enterprises that purchase pigs primarily from Hungary or the Netherlands, and process them in scattered smaller facilities in the wider Drniš area. The potential pršut production capacity of the area is currently 130,000 pieces. Annual production, by contrast, amounts to approximately 30,000 pieces (or 23% of capacity), which is a 70% decrease versus pre-war levels. Annual consumption of pršut in Croatia is estimated at 895,000 pieces. The Drniš manufacturers' current market share is, therefore, a mere 3%. At present, overall Croatian production levels are registered at approximately 141,000 pieces of pršut annually, with imports of pršut representing approximately 41,000 pieces. This means that grey market production, at an estimated 713,000 pieces, is an astounding 80 percent of total Croatian pršut consumption.

Drniš pršut producers face significant challenges in their day-to-day business operations. These include: 1) problematic raw materials supply, 2) lack of financing, 3) weak cash flow, 4) unutilized capacity, 5) limited product availability, 6) lack of branding, 7) poor packaging, and 8) lack of market access. Additionally, false “Drniš Pršut” re-labeling by importers of Italian pršut is considered by Drniš producers to be the greatest challenge facing their industry today.

FI has been asked by the local authorities to review the pršut production situation in the municipality and to propose measures in an effort to revitalize the industry to its former pre-war levels. In particular, the municipal officials would like to see the reactivation of the Mesopromet enterprise that would bring, in their view, significant benefits to the local area. Although FI is skeptical about Mesopromet's ability to produce and process ham in accordance with modern ecological standards, smaller enterprises leveraging the reputation of Drniš for quality smoked ham can add significant benefit to the local community. FI therefore focuses this analysis on measures necessary for these smaller producers to survive and prosper in today's difficult market.

FI has already started a technical assistance program designed to assist the Drniš producers in overcoming these business challenges, an essential element of which is formation of a registered Industry Association designed to promote their craft and protect their interests. In the course of this

analysis, a more comprehensive overview of the obstacles facing Drniš producers will be presented, followed by recommended courses of action to be taken by the producers and the community toward the reversal of the current situation. FI will provide technical assistance to the pršut industry as a whole, as well as to individual producers, within the context of the USAID-funded ECRA program to resolve these issues.

2. Background

Drniš smoked ham (Italian: prosciutto or Croatian: pršut) is well known throughout all of the former Yugoslav republics as well as in many foreign countries. It has a reputation for exceptional taste and quality; enhanced by the fact that it was the pršut of choice of the Austro-Hungarian emperors and other foreign statesmen, as well as of Josip Broz Tito. Drniš pršut was even among the menu items served at the coronation celebration of Queen Elizabeth II. This gives Drniš pršut a marked advantage on the consumer market in Croatia and abroad, and in effect has created an image of quality and high production standards that still adds value today.

Prior to the conflict, hundreds of Drniš residents were employed either as pig producers or in drying facilities that provided significant income to the local area. At that time, approximately 350,000 pieces of pršut (all smoked) were produced throughout Croatia, with the plurality of pršut production in the Drniš municipality (74,000 pieces or 24% of total pre-war production) produced by Mesopromet, the former state run enterprise. This facility, along with the pig farm that supplied the facility with raw materials, was completely destroyed during the recent conflict and currently stands abandoned. A description of these facilities, and their potential role in the revitalization of the Drniš area, are outlined in more detail under the heading of “Mesopromet” in section 6.

Although there exist a significant number of small, independent producers who make small quantities of pršut for personal use and/or sale on the grey market, the vast majority of registered pršut produced in the Drniš municipality today is produced by the manufacturers described in this report. Of these,, only three were operational prior to the conflict. Two recently constructed facilities are not yet operational, having run out of funding prior to completion of construction. These facilities have a combined capacity of approximately 130,000 pieces, representing an increase of 26% over pre-war levels. Despite this, these facilities are producing at roughly a third of pre-war levels (approximately 30,000 pieces) due to cash flow and financing difficulties. Furthermore, approximately 50% of overall production is “serviced” product, whereby raw materials are purchased by other individuals/legal entities, with pršut manufacturers responsible for the process of curing the ham only. Resort to such arrangements emphasizes the extent of cash flow difficulties currently facing pršut producers, as well as their desire to increase their utilization of existing capacity by any means possible.

3. Overview of Findings

Drniš pršut producers face many of the same constraints as all small and medium enterprises in Croatia: high taxes, poor access to (and/or unfavorable terms of) financing, weak marketing, poor financial skills, a strong domestic currency, etc. However, these are compounded by additional constraints more specific to the agribusiness sector, such as subsidized foreign competition, as well as the poor genetic quality of livestock that results in poor quality meat production.

FI's analysis has shown that eight major issues, many of which are inter-related, must be addressed by the Drniš pršut producers if they are to survive and prosper in the Croatian market:

- 1) **Problematic raw materials supply:** Raw materials supply is one of the largest obstacles facing pršut manufacturers. Prior to the conflict, the Drniš-based Mesopromet facility supplied the area with the overwhelming majority of finished pigs. With that resource gone and with availability and quality constraints associated with domestic supply, producers have been forced to procure pigs primarily through import.. In addition, imported product is not of preferred quality. Manufacturers unanimously agree that optimal parameters for pršut production are raw materials procured from a Landrace or Duroc breed of pig that is approximately 140 kilograms in weight at time of slaughter. Despite this, most producers select their raw materials based solely on purchase price, with the majority of raw materials obtained from pigs of unknown origin (breed) and of 100- kg weight at time of slaughter.
- 2) **Lack of financing:** Virtually all producers in Drniš lack access to vendor or debt financing sufficient to keep their companies liquid over their 10-12 month production cycle. As part of a program focused on the war-affected areas, the Croatian Bank of Reconstruction and Development (HBOR) provided loans to a number of pršut producers in 1998. However, the HBOR loan program allowed for capital investments in processing equipment only. To date, only one of the pršut producers in the area has been able to secure additional financing for working capital and raw materials, since strict collateral requirements result in the majority of producers being unable to meet bank loan conditions.
- 3) **Weak cash flow:** Due to the seasonality of their businesses, all producers surveyed have significant challenges in generating enough cash on a year-round basis to cover production expenses. An investment of approximately 50,000 USD is required for each 1,000 pieces of pršut produced. This is a considerable amount by local standards, particularly given that raw materials must be procured during a three-month time period in late fall due to optimum climatic conditions that only occur during specific periods of the year. Furthermore, the majority of manufacturers in the Drniš area process only two items, pršut and neck (pancetta), and therefore have no other sources of cash flow to help offset lengthy production cycles of 10-12 months. This situation is further compounded by seven-day repayment terms on raw materials procured outside of Croatia's borders. This forces many producers to purchase supplies from larger domestic meat processors who purchase imported raw materials in large quantities and offer lengthier credit terms, but at higher price points. Slow customer payment also places a significant burden on already cash-strapped pršut processors, and lead to further cash flow difficulties.
- 4) **Excess capacity:** Directly related to cash flow issues, manufacturers are currently operating at a fraction of capacity that inhibits unit cost reductions that result from increased production, realized through operational efficiencies. As pršut is already perceived as a high priced "luxury" good whose demand is predominantly reserved for special occasions, such inefficiencies further negatively impact product sales. This is particularly true in the current economic environment where consumers are exceedingly price sensitive. In addition, false branding of lower-priced, industrially produced pršut (portrayed as "traditional" by many unethical non-Drniš producers) also benefit from more attractive price points to consumers.

- 5) Limited product availability: Lack of cash flow leads to excess capacity, which results in limited product availability, which in turn hinders Driš pršut manufacturers' ability to access key distribution channels. A prerequisite to product placement in high volume hyper/supermarket channels is the ability to provide continuous and reliable product supply. At present, Driš producers are unable to meet such criteria due to cash flow constraints that prohibit the acquisition of sufficient quantities of raw materials to meet trade channel volume requirements.
- 6) Lack of a coherent brand image: The Driš pršut product is for the most part not protected, either legally or in a marketing sense, by a formally registered brand. Branding has begun to play a very significant role in product promotion in the Croatian marketplace. Equally important, brand recognition and market dominance have become the key criteria through which manufacturers attain distribution at high-volume and fast-growing retail food chains. Branding would serve to legally protect the name of "Driš Pršut" and reduce the amount of falsely branded pršut that is flooding the market (a practice the Driš producers refer to as "dumping").
- 7) Poor packaging: Closely related to branding, packaging standards in Croatia are very sophisticated, with prominent branding and attractive graphics becoming the norm. As Croatia is a net importer of food products, competitive products from all over the world are sold. Thus, Croatian consumers have become accustomed to products of world standard. Driš manufacturers must move toward packaging standards that conform to modern standards if they are to effectively compete in their own market. Although Driš manufacturers offer two package configurations (whole and sliced), the packaging itself lacks branded identification and graphics that would serve to attract consumer attention and encourage brand loyalty. In most instances, government-labeling requirements (consisting of company name and registration number, product ingredients, and storage instructions) are the only visible markings associated with these products. This puts Driš pršut manufacturers at a distinct disadvantage in the Croatian retail market, where shelf space is at a premium and brand recognition as well as the attractiveness and persuasiveness of the label are vital to securing such space.
- 8) Lack of Market Access: The Driš producers have weak links to consumer-focused retail distribution outlets. Prior to the war, Mesopromet was the distribution arm for the state run pršut enterprise, delivering meat products to 180 company owned shops as well as to hospitals, hotels, and military installations across the entire former Yugoslavia via a network consisting of 200 trucks and 150 small cars. Over 60 percent of all Driš pršut sales were distributed through state run tourist companies (restaurants, hotels, tourist boats, etc.), with the remaining volume distributed through the 180 state-run shops in middle Dalmatia (from Zadar to Dubrovnik). Today's retail landscape is significantly altered from the pre-conflict period, with company managers ill-informed and lacking the expertise required to effectively operate in such a rapidly changing environment.

The existence of these weaknesses and incapacities of the Driš pršut producers significantly inhibits their ability to produce profitably and to adequately exploit their products' historical international reputation for quality. As a result, the industry as a whole shows weak performance and is not impacting the local economy in the most beneficial or effective way possible.

Although many of these problems are interrelated, and in some cases are caused by a wider Croatian lack of competitiveness in overall agricultural production, there are potential solutions for the challenges of the Driš pršut producers. FI has a number of suggestions about how to address these shortcomings, which are covered under the heading "Recommendations" in section 8.

4. Current Situation

4.1 Consumption

Changes in government category classifications prevent the direct access of official historical statistical data related to the consumption of pršut. Prior to 1998, pršut was included within the category of “smoked meat”. In 1998 this system was changed when Croatia adopted a new coding system based on the “European Standard Classification of Individual Consumption by Purpose” (COICOP-a), which altered the classification to encompass dried, smoked, and salted meats. Following this change, two household censuses of 3,600 families throughout Croatia were conducted (1999 and 2000) to obtain an appropriate baseline of overall consumption according to the newly designated classifications.

In addition to these changes and as a result of poor overall record keeping, historical consumption information is sparse, with the most recent record of per capita consumption of dried, smoked and salted meat dating back to 1988. Furthermore, while the 1988 data has segmented the information into various categories, the census did not. However, assuming that consumption patterns within the subsections of meat have not changed, it is possible to overlay the 1988 information with the 1999/2000 census findings to extrapolate more recent per capita consumption according to the various category delineations (**Figure 1**).

Per Capita Consumption of dried, smoked and salted meat						
	1988		1999		2000	
	kg	%	kg	%	kg	%
Pršut, neck, back	4,8	37,80%	<i>6,0</i>	<i>37,80%</i>	<i>6,07</i>	<i>37,80%</i>
Bacon	2,3	18,11%	<i>2,89</i>	<i>18,11%</i>	<i>2,91</i>	<i>18,11%</i>
Other dried meat	5,6	44,09%	<i>7,05</i>	<i>44,09%</i>	<i>7,09</i>	<i>44,09%</i>
Total	12,7	100,00%	<i>15,98</i>	<i>100,00%</i>	<i>16,07</i>	<i>100,00%</i>

Note: Italicized figures are extrapolated: actual data not available.

Figure 1

Source: Croatian Central Bureau of Statistics

Furthermore, based on industry expert assessments, it is estimated that pršut consumption represents 20% of the “Pršut, neck, and back” subsection¹. It can therefore be ascertained that in the year 2000, per capita household consumption of pršut equated to 1.21 kilos (20% of 6.07) of pršut per person (**Figure 2**).

Per capita consumption of pršut			
	1988	1999	2000
Pršut, neck, back (kg)	4,8	<i>6,0</i>	<i>6,07</i>
Pršut only (kg), inside household	0,96	1,21	1,21
Pršut only (kg), outside household	0,14	0,18	0,18
Total Pršut per capita consumption	1,10	1,39	1,40

Source: Croatian Central Bureau of Statistics

Figure 2

¹ Estimation made by a panel of industry experts comprised of Mr. Danijel Karoly (technologist, Zagreb Agronomy Faculty), Mr. Damir Pijaković (Agronomist), Ms. Karmen Sinković (Ministry of Agriculture & Forestry), and Dr. Damir Kovačić (Assistant Professor, Faculty of Agriculture University of Zagreb)

This figure must then be further extrapolated to reflect consumption patterns outside of Croatian households (i.e. restaurants). In accordance with European methodology criteria, the average consumption level of premium products outside of the household is 15 percent, bringing total domestic per capita consumption of pršut to 1.4 kilo per year. Given a current population of 4.3 million persons, this translates to 6,020,000 total kilos of pršut (or approximately 860,000 pieces) consumed by the domestic population.

Lastly, to complete the picture, consumption figures associated with the tourism sector must also be included. In 2000, tourism traffic amounted to slightly less than 40 million tourist overnight stays. On an annualized basis, this represents the equivalent of an additional 109,600 persons. As tourists typically consume higher levels of locally produced specialty goods given lack of availability in their own country, the average per capita consumption must be raised to reflect such variances. As such, it is estimated that total consumption applicable to tourism equates to approximately 250 tons, or 35,700 pieces.²

In total, annual consumption of pršut in Croatia equates to roughly 895,000 pieces. This results in an estimation of 3% market share for the Drniš pršut manufacturers.

4.2 Production

The production process for smoked ham (pršut) is not technologically intensive. All Drniš manufacturers are producing in accordance with traditional production processes that capitalize on the mix of sea and mountain air, as well as frequent temperature changes and moisture oscillations which are specific to the Drniš area and which create optimal conditions for the curing of smoked ham. These include the natural occurrences of two major wind types: “Jugo” for the warm, moist conditions originating from the south and “Bura” for the dry, cold conditions originating from the north. A detailed description of the Drniš pršut production process can be found in **Appendix A**.

With regard to domestic production figures, official statistics as submitted by registered businesses are not itemized by individual line item, but rather include both plečka and pršut (the front and back legs of a pig). However, it is estimated that 80% of all production contained within this classification corresponds to pršut production.³ On this basis, it can be determined that in the year 2001, registered enterprises in Croatia reported a total level of pršut production of 141,000 pieces (**Figure 3**). That being the case, there are enormous implications regarding officially reported domestic production levels of 141,000 pieces and registered imports of 41,000 pieces, given annual domestic consumption estimations of 895,000 pieces of pršut. This can be explained by the increasing prevalence of pršut production on the “grey market.” The grey market is defined here as consisting of pršut that is either illegally imported, or produced by unlicensed entrepreneurs who operate outside of the applicable Croatian statistical, tax and health inspection systems.

In total, grey market production levels are approximately 713,000 pieces of pršut, or an astounding 80 percent of total domestic pršut production (explained further in section 4.3):⁴

² Assuming per capita consumption of 2.5 kilograms per person.

³ Estimation made by a panel of experts comprised of Mr. Danijel Karoly (technologist, Zagreb Agronomy Faculty), Mr. Damir Pijaković (Agronomist), Ms. Karmen Sinković (Ministry of Agriculture & Forestry), and Dr. Damir Kovačić (Assistant Professor, Faculty of Agriculture University of Zagreb)

⁴ An official summary of the largest Croatian producers, with itemized reported quantities of salted, smoked and dried pršut and plečka, confirms these findings.

Domestic reported production of pršut & plečka					
	1997	1998	1999	2000	2001
Registered Enterprises					
Pršut & Plečka (tons)	1,512	2,283	1,489	1,286	1,234
Pršut only (tons)	1,210	1,826	1,191	1,029	0,987
Pršut only (pieces)*	172,800	260,914	170,171	146,971	141,029

*Note: Conversion rate: 1 pršut = 7 kilos

Source: Croatian Central Bureau of Statistics

Figure 3

4.3 Import/Export

In 2001, imports of pršut reached 285 tons (or approximately 41,000 pieces of pršut), with data for the first 6 months (131 tons, or approximately 18,500 pieces) indicating that 2002 levels will be comparable (**Figure 4**). Such import levels are approximately 36% higher than current production levels of all Drniš pršut producers combined. As further comparison, exports of domestic pršut at 15 tons (or approximately 2,100 pieces) are relatively miniscule (see **Appendix C** for information on Croatian dried meat exports). The largest importers of pršut products have historically been Bosnia and Hercegovina and Slovenia. This is not surprising given both countries are considered preferential trading partners, a status that results in zero import duties.

Italy has also witnessed tremendous gains in recent years, a phenomenon that is due in large part to the common practice (by many Croatian producers) of importing cured or partially cured Italian ham, smoking it for a short period of time (if at all), and then repackaging and selling it as higher valued Dalmatinski pršut. Drniš pršut manufacturers view this fraudulent practice as one of the most pressing issues facing the industry today. Industrial manufactured Italian products have lower production costs associated with both shorter production cycles as well as a production cycle that takes place year round. This ultimately allows for a lower and more favorable sales price, making it exceedingly difficult for Drniš producers and their legitimate traditionally produced items to effectively compete.

Historical levels of pršut imports, by country

IMPORTS	1995	1996	1997	1998	1999	2000	2001	2002*
Finished Product (tons)	52	120	217	236	192	110	285	131
- BiH	0	74	175	197	106	19	73	21
- Slovenia	30	13	11	22	20	34	51	16
- Italy	18	25	26	15	60	57	154	90
- Austria	4	3	3	2	6	0	0	4
- Hungary	0	4	2	0	0	0	7	0
- Spain		1						
Finished Product (equiv. pieces)	7.429	17.143	31.000	33.714	27.429	15.714	40.714	18.714
- BiH	0	10.571	25.000	28.143	15.143	2.714	10.429	3.000
- Slovenia	4.286	1.857	1.571	3.143	2.857	4.857	7.286	2.286
- Italy	2.571	3.571	3.714	2.143	8.571	8.143	22.000	12.857
- Austria	571	429	429	286	857	0	0	571
- Hungary	0	571	286	0	0	0	1.000	0
- Spain	0	143	0	0	0	0	0	0

* January – June 2002

Source: Croatian Central Bureau of Statistics

Figure 4

4.4 Distribution

The Croatian retail food sector has changed dramatically since the opening of the first western-style supermarket chain in Zagreb in 1997. Although small shops continue to be the dominant food retail sales channel, more developed distribution outlets are rapidly gaining market share. In Western Europe, the vast majority of retail food sales now occur in supermarkets and current trends indicate that this channel will represent a significant portion of all Croatian retail food sector sales as well. Figure 5 provides specifics related to Croatian food channels:

Food Distribution Channel	1997	1998	2000	2001	% Change 2001 vs. 2000	2001 % of Total	% of Total Sales
Hyper/Supermarkets	157	180	239	216	-10%	1,3%	17%
- Hypermarkets	5	25	28	46	64%	0,3%	
- Supermarkets	152	155	211	170	-19%	1,0%	
Large Grocery	853	805	928	1,150	24%	6,9%	17%
Medium Grocery	3,766	3,428	3,852	4,242	10%	25,6%	33%
Small Grocery	7,478	6,242	6,158	7,046	14%	42,5%	28%
Kiosk/Tobacconist	2,416	2,334	3,062	3,269	7%	19,7%	5%
Drug Stores	573	536	596	651	9%	3,9%	
Total	15,243	13,525	14,835	16,574	12%		
Restaurant/Bistro	3,472	3,302	3,858	4,101	6%	22%	N/A
Café/Buffer	8,681	8,935	11,082	12,981	17%	69%	N/A
Pub/Snack Bar	958	991	1,554	1,825	17%	10%	N/A
Total	13,111	13,228	16,494	18,907	15%		
Channel-Related Total	28,354	26,753	31,329	35,481	13%		

Source: AC Nielsen, 2002

Figure 5

In 2001, hyper/supermarkets and large grocery stores represented only 8% of all food store outlets in Croatia, but 34% of all retail sales turnover.⁵ In addition, 37% of all households conducted the majority of their shopping at such venues in 2002, up from only 18% just two years ago.⁶ Furthermore, food service establishments (which were once serviced direct via former socially owned enterprise distribution networks) are now procuring supplies directly from large grocers/hypermarkets given the dissolution of the previous distribution networks.

Although primarily confined to the Zagreb area, new “specialty store” channels focusing on the distribution of traditional Croatian products have begun to emerge. In Croatia there are approximately 20 such stores selling domestically produced items such as pršut, wine, cheese and olive oil. Perceived higher quality enable such venues to command a higher price point than that of similar products distributed at venues such as grocery stores. Although the success of such venues is yet to be determined, and their potential viability as a distribution outlet of any significance is contingent upon extended penetration into other regions, it is a distribution option that should be closely monitored by Drniš pršut producers.

⁵ AC Nielsen 2001 census data

⁶ Croatia Retail Food Sector Supermarkets and Market Research Firms 2002, Foreign Agricultural Service GAIN Report, 7/08/2002.

Currently, the majority of Drniš pršut producers distribute their products to restaurants, small shops, or directly to consumers. There is a conspicuous lack of product presence by Drniš pršut manufacturers in large grocery/supermarket channels, despite significant penetration by other domestic and international producers. Several explanations for this current phenomenon can be drawn as follows:

- Small production volumes make it difficult to guarantee consistent and reliable product delivery, which is an entry requirement to supermarket venues;
- The existence of well-developed branding initiatives by other pršut producers operating in grocery trade channels (another requirement for entry), and a lack of such initiatives by Drniš producers;
- Lower priced, industrially produced pršut and hybrid type products marketed under the renowned name of “Drniš ” or “Dalmatinski pršut” (which infer a traditional production process but allow for a more attractive price point), which place higher priced traditionally produced Drniš pršut at a severe disadvantage.⁷
- A lack of market information which is vital to understanding:
 - The competitive landscape;
 - Current trends within the marketplace that affect the development of appropriate and effective channel and distribution strategies;
 - Consumer preferences concerning product and package offerings.
- Preferential trade agreements that significantly reduce or eliminate import tariffs on pršut products from neighboring countries, thereby providing foreign manufacturers with a pricing advantage in the marketplace. This advantage is a further detriment to domestic producers in light of the fact that this policy has been severely abused by other countries that have exported more product than is legally permitted according to Certificate of Origin requirements.⁸

4.5 Pricing

Detailed retail pricing information is difficult to track in the Croatian marketplace, as in-store product code scanning devices that are typically utilized to track such information have only recently shown up in the marketplace. However, based on an FI-conducted pršut price survey, the retail price for pršut products ranges from 97 - 125 HRK per kilogram for a whole pršut, 138 - 160 HRK per kilogram for boneless Pršut, and 130 – 260 HRK for sliced vacuum packed product. Restaurants are able to command a higher price point, with serving sizes equating to approximately 600 HRK per kilogram.

By comparison, Drniš pršut products wholesale from 72 to 82 HRK per kilogram (plus VAT) for a whole pršut and from 130 - 160 HRK per kilogram (plus VAT) for sliced vacuum packed product. The average retail markup is in the 10 – 20% range, or 15% on average. The lower prices of Drniš pršut can be attributed to 1) poor packaging; 2) low quality due to imported raw material; and 3) lack of a coherent brand image.

⁷ Traditionally produced pršut products have higher production costs associated with a lengthier production cycle of 10 to 12 months. Industrial manufactured pršut has a production cycle that is approximately 3 months in duration, while hybrid products (industrial product using traditional methods) have a cycle of approximately 8 months in duration.

⁸ To be in compliance with “Certificate of Origin” requirements, a good must be entirely produced in the country from which it will be exported. However, the Ministry of Economy stated that countries such as BiH are known for providing fraudulent Certificate of Origin papers, while Slovenia (until recently) exported quantities that significantly exceeded the number of pigs/pršut produced in that country. Such practices have provided these producers with an unfair competitive advantage, as well as offered the opportunity to gain a stronghold in Croatia.

4.6 Financing

Under a Croatian government program focused on revitalizing the war-affected areas, the Croatian Bank of Reconstruction and Development (HBOR) provided loans to a number of pršut producers in 1998. Terms of financing were considered favorable: ranging from 3-5% interest, payable over seven years, with a two-year grace period. However, stipulations contained within the loan program allowed for capital investment expenditures in building construction and equipment only; funding for raw materials purchases or required working capital was not permitted.

Nearly half of all Drniš pršut manufacturers acquired financing through HBOR at that time, with loans ranging from 50,000 - 500,000 USD. However, given cash flow challenges related to long production cycles and an inability to secure financing for raw materials acquisition, repayment of such loans by the majority of producers has proved exceedingly difficult, with many producers now unable to meet repayment terms. To date, only one pršut producer in the area has been able to secure funding for the purchase of raw materials (at 7% interest), as collateral requirements are both stringent and steep, with the majority of producers unable to meet compliance factors.

4.7 Regulatory Environment

By signing several trade agreements, Croatia's markets are becoming integrated into regional and world markets. Croatia joined the World Trade Organization (WTO) in November 2000, at which time it harmonized its national legislation with WTO rules. Croatia also liberalized the services market and significantly reduced import duties on agricultural products (see **Appendix C** for specifics on current dried meat import tariffs).⁹

Croatia currently has free trade agreements with Bosnia-Herzegovina (BiH), Hungary, Macedonia and Slovenia, while negotiations have been concluded with the Czech Republic, Slovakia and Poland. Additional negotiations are underway with Bulgaria, Turkey, Romania and Yugoslavia.¹⁰ Slovenia and BiH in particular have exceptional trade agreements that have significant implications for the pršut industry. Slovenia pays virtually no duty on the first 450 tons of pršut that is imported into Croatia, while BiH pays no duty and has no quantity limitations. Given such terms, it is no small surprise that Slovenia and BiH are among the largest exporters of pršut into Croatia.

Furthermore, under the Stabilization and Association Agreement (SAA) between Croatia and the EU, Croatia will gradually begin extending tariff preferences to the EU, providing free access to 70 percent of the value of EU agricultural products currently exported to the Croatian market.¹¹ While Croatian agricultural products in turn will be provided free access to the EU market, this is not necessarily welcome news for Drniš producers who are already experiencing significant pressure from foreign competitors, and are unable to meet the demands of their own market let alone those of new external markets.

Nevertheless, further trade liberalization of domestic agricultural food products is expected in the future and Drniš pršut will undoubtedly feel the effects. Further decreases in customs taxes will ultimately lead to increased competition and decreased prices, while consumer demand for higher quality products will continue to grow.

⁹ Republic of Croatia, Ministry of Foreign Affairs (<http://www.mvp.hr/mvprh-www-eng/5-multilateral/wto/>)

¹⁰ Croatia Agriculture/Agribusiness Assessment, July 2002.

¹¹ Croatia Country Commercial Guide 2002.

4.8 Competitive Environment

On the domestic front, three brands have significant shelf presence and widespread distribution: Dalmesso, Pivac and Posedarija. There are also several imported brands that enjoy similar status: Kras, MIP, and Lijanović. Aside from larger production volumes, there is one thing that all of these players possess that Drniš producers' conspicuously lack: branding initiatives (details related to local brands outside the Drniš municipality that have a large domestic market presence can be found in **Appendix B**).

Although Drniš producers are well aware of the value associated with the name “Drniš pršut” none have ever undertaken trademark registration protection, nor have they capitalized on this competitive advantage by prominently featuring “Drniš” on product packaging. Local producers simply lack the necessary knowledge (and resources) to turn this competitive advantage into a profitable asset, as well as the legal know-how related to protecting the Drniš name from fraudulent use by unethical producers.

5. Raw Materials (pigs)

5.1 Source/quality/quantity

Raw materials supply is one of the largest obstacles facing pršut manufacturers, and the greatest cause of poor liquidity. Prior to the conflict, the Drniš based Mesopromet facility supplied the area with the overwhelming majority of raw materials. With this resource gone, the majority of producers have been forced to procure imported product, given availability and quality constraints associated with domestic supply. In addition, even imported product is not of preferred quality. Manufacturers unanimously agree that optimal parameters for pršut production are domestically procured raw materials from a Landrace or Duroc breed of pig that is 140 kilograms in weight at time of slaughter. The pigs should also be fed a special diet and be housed on smaller-sized farms that enable them to exercise their legs.

Despite this knowledge, most producers procure imported raw materials based solely on purchase price, with the majority of raw materials obtained from pigs of unknown origin and breed, and having a 100-kilogram weight at time of slaughter. In recent years, the vast majority of raw material imports have originated from Austria and Hungary (see **Appendix D** for specifics related to levels of raw materials imports, by country).

Structural problems within the sector are also a major constraint to swine production, which in turn directly contribute to insufficient supply of raw materials in the domestic market. Private family farms dominate the core of the sector, comprising roughly 75% of hog inventories. In addition, approximately 70% of Croatian production comes from farms with 1-5 breeding sows, with the average production on family farms less than 10 fattened piglets annually.¹² Furthermore, although 90% of all swine slaughtering takes place in slaughterhouses, the market is predominantly comprised of small slaughterhouses, making market linkages between swine producers and food manufacturers difficult to establish.

Compounding the problem further is the fact that Croatian swine levels were severely diminished as a result of the recent conflict and haven't yet reached pre-war levels.

¹² Croatia Livestock and Products. Dairy, Livestock and Poultry Situation and Outlook 2000. Foreign Agricultural GAIN Report, July 2000.

According to official statistical data, the total number of pigs in Croatia in 2001 was 1,234,000, or 22% fewer than 1990 levels of 1,573,000. As a result, imports of live swine for breeding and butchering exceed that of domestic supply levels (see **Appendix E** for further details on domestic and imported swine inventories). However, even if domestic raw materials were available, they would not meet the criteria necessary for the production of optimum quality pršut given the overwhelming majority of pigs are slaughtered at a weight of 100 kilograms due to the incremental costs associated with raising pigs to the preferred weight of 140 kilograms.

5.2 Price Information

As was the case with retail pricing of finished product, information related to raw materials pricing is equally limited, with current prices by Drniš pršut producers the only information accessible. Current pršut pricing (in raw, unprocessed form from pork producers) ranges from 30 - 33 HRK per kilogram as outlined in **Figure 6**.

Drniš Company	Raw Pršut Purchase Prices*	Amount of pršut purchased annually
Bel-Cro Trade, d.o.o.	31 -33 HRK/kilo	4,000 pieces
Sušiona Samac	N/A	N/A
Pršut ana Ivić	30 HRK/kilo	2,040 pieces
Lovrić Stojak Ltd	N/A	N/A
“NIRA” d.o.o.	29 – 33 HRK/kilo	3,000 pieces
Dar94 d.o.o.	32 - 33 HRK/kilo	315 pieces
Zvonimir Marin	32 HRK/kilo	400 pieces
Blažević	31 - 32 HRK/kilo	3,500 pieces
Meli Milka d.o.o.	31 HRK/kilo	1,500 pieces
Maleš Milenko	Service only	5,000 pieces

*Includes VAT

Figure 6

5.3 Regulatory Environment

In general, the probability that Croatia will eventually enter the EU is heavily influencing the policy environment for agricultural producers, with decisions made in an effort to enable entry in the best possible position. Increased production levels can potentially have important implications for future production-based subsidies from the EU.

Incentives and subsidies for procurement of pigs and pig fattening are currently provided in an effort to increase domestic levels. In 1999, subsidies of 110 HRK per animal for swine fattening within the “Area of Special State Concern” were introduced, which ultimately amounted to 7.5 million HRK in subsidy payments. In addition, special subsidies for swine slaughtering were introduced in the year 2000, which offered farmers who delivered to market at least 10 fattened swine of domestic origin (average weight of 90 to 130 kilos). This subsidy varied depending on quality of meat (in January 2001 the number of animals required for eligibility increased to 50 head). Other subsidies include selective payments per head and other measures for breeding or domestic species of swine.¹³ However, in the context of WTO accession, Croatia has committed to implementing additional trade liberalizing measures, thus future subsidies and incentives will be significantly reduced, as indicated in **Appendix D**.

¹³ Croatia Livestock and Products USDA GAIN Report, July 2000.

Regarding import duties, the customs duty is the only important duty payable on the import of goods. Croatia has harmonized its Customs Tariff Act in accordance with WTO rules and regulations, and thus will gradually reduce customs protection levels. However, in keeping with the Croatian governments overall objective of raising domestic swine levels, imports of live pigs that will be utilized for breeding purposes are free of duty. **Appendix E** provides additional details relating to pork import tariffs.

6. Mesopromet Drniš

6.1 Background

Before the recent conflict, Mesopromet Drniš consisted of a pig farm, cow farm, slaughterhouse, pršut facility, bakery, warehouse, 5 retail stores, and an office building. In total, these operations employed over 300 persons. Mesopromet was an integrated firm that controlled all levels of pork production, processing, distribution and sale, which was typical in the socialistic operating environment of that time. Many Drniš residents look back with nostalgia at the Mesopromet operation, and continue to believe that it can and should be revived to its pre-war status.

The facilities were looted and heavily damaged during the war, and have stood abandoned since August 1995. The company is currently in bankruptcy, with all facilities non-operational. The pre-war operations of the company were broken down into the following:

Pršut Production: The pršut processing area consisted of two facilities and employed a total of 60 persons. The older facility became operational in 1969 and had an annual processing capacity of 24,000 pieces of pršut. While not destroyed during the war, all the equipment belonging to the facility was looted, however, business operations could probably resume with minimal investment. The newer facility was opened in 1989 and had an annual capacity of 50,000 pieces of pršut. This facility was completely destroyed during the war.

Pig Farm: The pig farm included land holdings of 205,350 square meters and buildings comprised of 35,000 square meters. The facility housed 15,000 pigs of 100-kilogram weight, 94,000 piglets and 4,000 sows, with 110 persons employed to operate the facility. During the conflict, most of the property was destroyed and/or looted. To make only a fraction of the facility operational today would require a minimum investment of USD 400,000 to cover reconstruction and equipment needs.

Slaughterhouse: The slaughterhouse had a processing capacity of 100,000 pigs per year and employed a total of 35 persons. The building incurred little damage during the war; however, all equipment was looted from the facility.

With regard to those facilities connected to the production of pršut (pig farm, slaughterhouse and pršut factory), it is estimated that an investment of USD 10 million would be needed for the facilities to become operational.¹⁴ This has been assessed at USD 3-4 million required for basic equipment & building reconstruction, and USD 6-7 million in working capital.

¹⁴ Investment details provided by Zvonimir Marin, former director of Mesopromet pig farm and consultant hired by Galion (an earlier potential buyer of Mesopromet Drniš) to assess the capital needs of the facility.

6.2 Current Situation

6.2.a Ownership

The first public tender for Mesopromet Drniš was announced in 1998. However, over a year (and six public tender announcements) passed before IPK Osijek presented an offer that was ultimately accepted by the Split bankruptcy court. When after three years IPK Osijek was still unable to secure the necessary funds to purchase the enterprise, the court passed a decision to void the agreement, and thus in February 2002 the bankruptcy court once again initiated the public tender process.

In July 2002, an offer of 5.5 million HRK was made by Galion LLC, a Dutch-Croatian joint venture, and was accepted by the court. In addition to the agreed upon purchase price, a part of the agreement included a requirement for Galion to hire 40 former workers of Mesopromet, a stipulation that was to commence immediately following the official purchase.

In partnership with Galion LLC, the De Kleiduif BV Company of Holland put forth a letter of guarantee for 80,000 Euro, with Privredna Banka (Zagreb) agreeing to loan Galion an additional 1.3 million Euro. In accordance with the terms of the agreement, the 80,000 Euro was to be paid within 30 days of the signing of the agreement. When that date came and passed with no funds from Galion, the court agreed to a 30-day extension request (through October 2002).

In accordance with the extension agreement, Galion LLC was to bring a new (and Croatian) guarantor to the table, with the remaining purchase balance due within 30 days. That deadline has now passed, with no action taken by Galion. As a result, the purchase agreement has now become null and void, with the Mesopromet enterprise once again available for sale. The bankruptcy court trustee overseeing the sale of Mesopromet will soon issue another public tender announcement by the end of November, with the court currently considering the option of potentially separating the business units and selling them off as individual entities.

In light of this information, the Drniš municipal officials requested that FI examine the situation and attempt to find a solution for the Mesopromet facility. After surveying the overall Croatian market for companies interested in pršut, FI contacted the Croatian food manufacturer Podravka to gauge their interest regarding the Mesopromet facility, as well as examining potential initiatives directed toward the establishment of raw materials linkages for Drniš pršut producers. It was quickly determined that Podravka may be interested in discussing Mesopromet ownership with the bankruptcy court. FI will work with the company and the bankruptcy court to facilitate their involvement, if such a step makes sense for all parties involved.

The Podravka Group is the largest food company in Central and Eastern Europe. The company comprises eight strategic business units, one of which is in the meat industry (Danica d.o.o.). With 730 employees, Danica is the largest domestic producer of fresh and processed meat. Its operational facilities include a slaughterhouse, a tinned meat plant, a plant for the production of sausages and dried meat, and a plant producing semi-cooked food. Pršut is not currently among its product line but the company has recently begun a pršut pilot project in Posedarija and Sinj, with the intention to produce pršut for export. The company also maintains two pig farms that house 2,000 pigs each.

6.2.b Environmental Impact

FI suspected that the Mesopromet facility would not be able to meet modern Croatian environmental standards for large-scale pig production due to the nearby Čikola River, an increased focus on tourism in the area, and the lack of current water-filtering cisterns at the facility. To determine whether or not this is the case, FI hired consultant Dr. sc. Ivica Kisić, an environmental specialist from the Zagreb Agricultural Faculty, to prepare a list of measures necessary to evaluate the potential impact on the environment of the reactivation of the Mesopromet pig breeding facilities.

In reference to the reactivation of Mesopromet, according to Dr. Kisić, there are two primary laws that govern the environmental impact of a livestock production facility. These are Narodne Novine (NN) 59/00 “Law on Evaluation of Environmental Impact and NN 77/98 “Law on Water Classification.” Any potential facility producing more than 500 head of livestock a year must comply with both of these regulations.

In accordance with the provisions of NN 59/00, an environmental impact study must be completed in accordance with a specific format as specified in the law. This study must contain a number of elements that are subject to review by relevant local, county and national authorities, particularly the Ministry of Environmental Protection and Physical Planning. According to Dr. Kisić, it is highly unlikely that the Mesopromet facility, with its plans to raise 5,000 pigs a year there, can comply with recent environmental regulations due to:

- Lack of adequate, closed means of disposal for animal waste;
- Presence of nearby underground water springs;
- Nearby location of Peter’s Field and Cikola River, both of which are sensitive eco-systems.

In accordance with the provisions of NN 77/98, wastewater from production facilities must meet rigid cleanliness and purity standards. Additionally, measures to prevent contamination and to meet disposal standards when located near other bodies of water must also be in compliance. The nearness of the Cikola River, which flows into the Adriatic Sea, will cause significant problems for the future facility in terms of compliance with the environmental law.

Based on the above, as well as considering the overall economic non-viability of pig raising due to high corn feed costs in Dalmatia, FI is skeptical that the Mesopromet pig production facility will be able to operate on its former scale. Although pršut-drying has a limited impact on the environment, the raising of pigs in the area is not recommended without a detailed review of these factors by any potential investor.

6.2.c Debt Levels

According to the Split bankruptcy court judge handling the asset disposal, the outstanding debts of Mesopromet Drniš are 45 million HRK (approximately 6 million USD). Over 40% of this debt is in overdue salary payments due to the former employees, while debts owed to the Croatian government comprise 25% of the amount. According to the bankruptcy court, the new owners of Mesopromet will most likely not be held responsible for all of the outstanding debts of the facility.

7 Pršut Companies/ Facilities in the Drniš area

7.1 Specifics, by company

FI’s analysis encompassed the following eleven facilities located in or near the Drniš municipality (of which nine are currently operational), representing the vast majority of all production in the area (**Figure 7**).

Company	Capacity		Currently Operational	Production		Product Mix				Raw Materials		Distribution Venues				% Serviced	# of Customers	# of Employees
	Pre-war	Post-war		Pre-war	Post-war	Pršut	Panceta/Bacon	Šokol/Neck	Other	% Imported: thru Middleman	% Imported: Direct	% Grocery	% Small Shops	% Restaurants	% Hotels			
Bel-Cro Trade	N/A	20.000	✓	0	10.000	✓	✓			80	20	-	40	20	20	60	30	4
Sušiona Samac	N/A	6.000		0	0					-	-	-	-	-	-	-	N/A	-
Pršutana Ivić	25.000	25.000	✓	25.000	6.000	✓	✓	✓		100	-	20	40	40	66	60	4	
Lovrić Stojak	N/A	30.000		0	0					-	-	-	-	-	-	N/A	-	
“NIRA”	N/A	6.000	✓	0	3.000	✓				-	100	40	50	10	0		4	
Dar94	N/A	2.500	✓	0	420	✓	✓			100	-	80	20		25	20	1	
Zvonimir Marin	N/A	1.400	✓	0	400	✓	✓	✓	✓	100	-	-	100	-	-		1	
Blažević	4.000	10.000	✓	4.000	3.500	✓	✓	✓	✓	-	-	-	67	33	-	0	60	26
Meli Milka		8.000	✓	0	1.500	✓	✓			-	-	3	60	37	0	50	1	
Maleš Milenko		20.000	✓		5.000	✓	✓	✓		0	0	-	-	-	100	1	4	
Mesopromet	74.000	0		74.000	0													
TOTAL	103.000	128.900		103.000	29.820													

Source: FI research

Figure 7

As shown above, the total potential capacity in the Drniš area is roughly 130,000 pieces, with annual production amounting to approximately 30,000 pieces or 23% of capacity. However, overall capacity is much lower (93,000 pieces) when one takes into account the fact that two of the included facilities are not yet operational due to capitalization issues (**Figure 8**). In addition, only two of the operational producers have an annual capacity of more than 25,000 pieces of Pršut, with the remaining producers having annual production capacity of roughly 20,000 pieces or less per year.

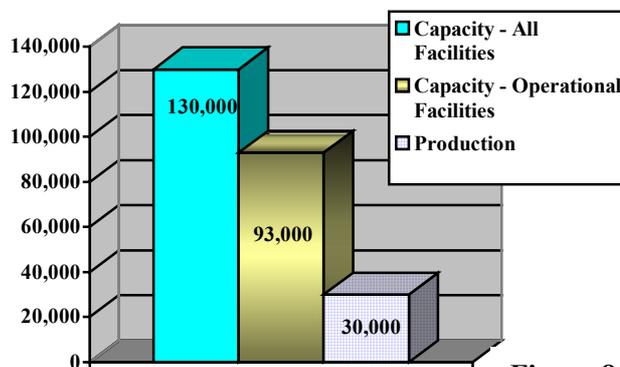


Figure 8

To provide additional perspective, the combined production capacities of all operational pršut facilities in the Drniš area represent only slightly more than the capacity of the largest pršut producer in Dalmatia (Dalmeso) prior to a recent fire that damaged its production facilities and significantly lowered operational capacities. **Figure 9** provides a graphical depiction of capacity and production specifics, by individual company.

Capacity versus production, Drniš facilities

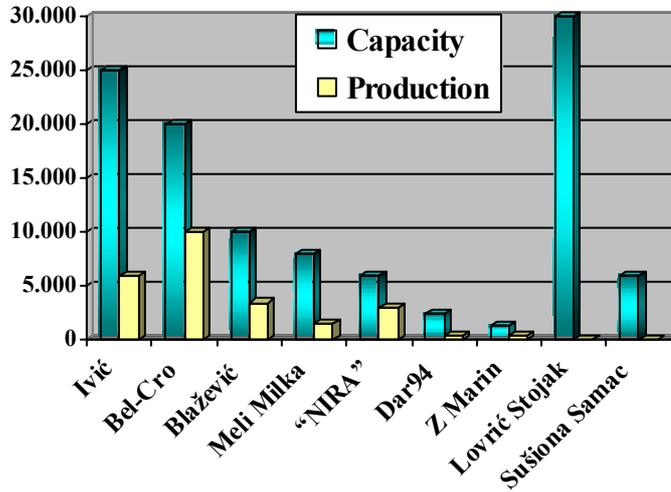


Figure 9

To effectively compete in the Croatian marketplace, Drniš pršut producers must raise overall production levels in order to achieve economies of scale necessary to lower operational costs, as well as attain the levels of distribution necessary to ensure their ultimate survival. FI provides a number of recommendations addressing these issues in section 8 of this report.

7.2 SWOT Analysis

The following SWOT analysis provides a snapshot of the strengths and weaknesses facing Drniš pršut manufacturers, as well as the opportunities and threats that may affect their businesses in the future.

Drniš Pršut Industry SWOT Analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> ✓ <i>Strong reputation for quality</i> ✓ <i>Specialized production technique</i> ✓ <i>Regional concentration, similar products</i> ✓ <i>Geographic location that provides optimal climatic conditions required for production</i> ✓ <i>Strong municipal support</i> ✓ <i>Entrepreneurial spirit</i> 	<ul style="list-style-type: none"> ✓ <i>Undeveloped market linkages</i> ✓ <i>Raw materials: poor & insufficient domestic supply and high costs</i> ✓ <i>Low production volumes, excess capacity and untapped capacity (non-operational facilities)</i> ✓ <i>Poor cash flow</i> ✓ <i>Limited access to capital</i> ✓ <i>Lack of branding</i>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ✓ <i>Ability to capitalize on pre-existing reputation of Drniš pršut through geographic branding initiative</i> ✓ <i>Creation of high-end product category that emphasizes quality, domestic origin, and a specialized, all natural production process</i> ✓ <i>Lowered operational costs resulting from purchasing inputs in larger quantities (Association)</i> ✓ <i>Access to high volume retail channels</i> ✓ <i>Improved business operations via technical assistance in key areas (marketing, distribution, sales, etc)</i> ✓ <i>Ability to learn from successful pršut consortia in other countries, which have already dealt with similar problems facing Drniš producers</i> 	<ul style="list-style-type: none"> ✓ <i>Market share growth of already established pršut brand, particularly from abroad</i> ✓ <i>Technical advances that shorten production cycle of industrial products, further lowering competitor production costs</i> ✓ <i>Continued poor economic environment in which price, rather than quality, is more important to consumers</i> ✓ <i>Continued lack of legislation that enables industrial manufactured products to be marketed as traditional</i> ✓ <i>Continued imports of low cost industrial products that are fraudulently marketed as "Dalmatinski" pršut, thereby enabling lower price points at shelf.</i>

8. Recommendations

The bulk of this report has addressed the financial, market and other constraints that have prevented the Drniš pršut industry from operating at capacity, and from generating its full potential for the local economy. In this section, FI presents a number of recommendations that can serve to provide a strategy to the local producers and focus their activities on the achievement of goals that, over the long term, will enable them to compete in a continually changing operating environment. It is not enough that the Drniš producers “increase sales” or “increase profitability.” The pršut producers need to completely change the way they do business if they are going to survive and prosper against larger, better-organized competitors with greater financial resources.

FI’s recommendations are based on the work of expatriate and local staff as well as that of a number of local consultants who were engaged to work directly with the pršut producers on production and marketing issues. These consultants include agronomists, university professors, economists and environmental specialists with over 60 years of collective experience in pork processing and marketing. From the start of FI’s technical assistance efforts in Drniš, the pršut producers themselves have been included in every aspect of the compilation of this report, including the organization of a field visit to view pigs in Dvor as a potential source of high quality raw material.

8.1 Marketing Segmentation/Distribution

Drniš producers need to attain a more thorough understanding of marketplace dynamics in order to develop strategies that will enable them to profitably grow their businesses. In the future, further trade liberalization will result in increased demand for products of higher quality. At the same time, the market will begin to segment into two predominant categories: 1) consumers seeking low-priced, standard-quality products and 2) consumers seeking premium quality products and who are willing to pay a premium price for them.

Low-priced, standard quality products will dominate the market, with imported products expected to command the greatest share of this market. It is estimated that this segment will comprise from 60-80% of the market, with the majority of distribution taking place in the grocery channel. In the pršut category, the vast majority of products represented in this segment will be industrial manufactured products. Given that time-intensive techniques associated with the production of traditionally produced pršut ultimately raise overall product costs, Drniš products will never be able to compete on price and survive in this market segment.

The Drniš producers can prepare for this gradual market shift in only three ways: by continuing production as they are, by attempting to compete through low prices, or by attempting to compete through high quality. This market shift, as well as recommended actions on the part of Drniš producers in the context of such a shift, is summarized in the bullets below:

a) Expected market changes:

- Further liberalization of domestic market,
- Strengthening of the competition,
- Differentiation of demand:
 - Segment of low prices and standard quality
 - Segment of premium pršut offering high quality

b) Market of premium pršut

- Market potential: 10 – 15% of total market (approximately 130-150,000 pieces),
- Segments: catering industry, tourism, business clientele

c) Proposed Direction of Drniš pršut producers:

- Production of top quality pršut,
- Positioning on the domestic market of premium pršut,
- Securing high quality domestic pork inputs

In the premium market segment, products must be of exceptional quality, which in the case of pršut requires the use of superior breeds of pigs that are raised to optimal weight prior to slaughter. Predominant trade channels of distribution for these products will be restaurants and hotels, as well as specialty stores. This is the segment in which Drniš pršut will need to compete if it is to succeed in the marketplace.

Therefore, FI recommends that the Drniš pršut producers begin a long-term program to increase production quality by procuring pork inputs domestically, and to focus marketing and sales efforts on the premium pršut market segment. This will require significant time and resources on the part of the producers, but will strengthen them against low cost, low quality imports (against which they cannot compete on price) by large non-Croatian producers. This shift will need to be accompanied by commensurate procurement and marketing activities, as below.

8.2 Drniš Pršut Producers' Association

As a part of its technical assistance efforts to the Drniš municipality, FI has initiated the formation of a Drniš Pršut Producers' Association in order to enable them to address issues that they would be unable to resolve on an individual basis. An "Industry Association" of pršut producers will allow for the optimal protection of their interests. As a result, the Association became an officially registered legal entity in October 2002. The Association currently has 12 members, the total of all active pršut producers in and around Drniš.

The bylaws of the newly established Association reflect its focus on issues of utmost importance to the producers in the Drniš municipality and include the following:

- Acquisition, and promotion, of the registered trademark "Drniš pršut;"
- Improving marketing and sales of dried meat products in which members compete;
- Promoting and preserving the domestic and international interests of members;
- Representing the industry to Croatian government and international representatives,
- Improving product presentation, literature and sales materials;
- Working in connection with both domestic and international associations with similar goals (i.e. Parma);
- Exchanging information and experience among members toward the greater goal of solving common business issues;
- Obtaining technical, legal, and accounting assistance.

The Association will be a key player in the overall development of the traditional pršut industry in Dalmatia, and will serve a strong role in protecting the interests of its individual producer-members. Eventually, the Association will oversee joint purchasing efforts in an effort to reduce input costs and improve quality. Through these and other services, the Association will eventually secure revenues necessary for it to finance its role in acting for the benefit of its members. FI will continue to provide technical assistance to the Association in order to strengthen the organization so that it is sustainable over time, as well as capable of providing the required services that are recognized as important by its members. This will ideally follow the "Parma Association" model as outlined later in this section.

8.3 Geographical Registration/Branding

Through the Association, FI recommends the initiation of measures toward the attainment of a geographic registration that will serve to legally protect the name of Drniš pršut, as well as to assist in the establishment of a stronger brand presence within the marketplace. To survive and grow in today's changing and highly competitive environment, it is critical that Drniš pršut manufacturers find a means by which to set themselves apart from other product offerings in the marketplace. A geographic registration not only provides the means by which to achieve this, but also provides the authentication necessary to secure consumer acceptance that the product is of premium quality.

There are two EU-certified types of geographical registration available to the Drniš pršut producers that would achieve this aim: the Protected Designation of Origin (PDO) and the Protected Geographical Indication (PGI) registration. A stipulation that production of raw materials and their processing into the final product take place entirely within the specific region that lends its name to the product currently precludes the ability of the Association to secure a PDO registration. The Protected Geographical Indication, by contrast, also refers to products which are linked to the region which lends them their name, but this link is looser, and of a different nature to that of the PDO. While the PGI product must also originate in the geographical area that gives it its name, only part of the production actually needs to be carried out in that area, while raw materials may come from other regions (for example, from Dvor).

Upon acquisition of a PGI registration, the product name becomes a distinctive sign to mark the product as unique within the market and to differentiate it from other products that do not carry the same characteristics. In so doing, Drniš manufacturers will be in a position to establish a reputable and cohesive brand presence that simultaneously communicates the high quality and intrinsic taste characteristics associated with the name of Drniš pršut. This will also pave the way to meet export requirements associated with foreign markets. It also reduces the possibility of unscrupulous practices by illegitimate producers that ultimately affect the reputation of legitimate products and cause economic damage due to business that is lost. The Association will be charged with monitoring marketplace fraud and false branding, and bringing it to the attention of the relevant Croatian authorities.

It is therefore recommended that FI provide technical assistance to the Association in order to facilitate the process, as well as to ensure that the producers properly adhere to all necessary procedures required for the acquisition of a Protected Geographical Indication certification.

8.4 Study tour

FI recommends that Association members take a study tour to Italy for the purpose of facilitating information and experience exchange between Drniš pršut producers, the Consorzio del prosciutto di Parma, and the Institute of Parma Quality (IPQ). The Consorzio del Prosciutto di Parma¹⁵ was set up by 23 producers in 1963 to protect the interests of producers, stockbreeders and traders involved in the production of Prosciutto di Parma. Today it has grown to represent 195 producers, 180 slaughterhouses and 5,500 pig breeders in northern Italy, and has become the industry standard to which all other smoked ham manufacturers compare themselves worldwide (see **Appendix F** for specifics surrounding the "Consorzio del prosciutto di Parma"). The IPQ is the monitoring arm of the operation that oversees and certifies the quality of Prosciutto di Parma.

¹⁵ The "Consortium of Parma Prsut," is an industry Association that produces over 11 million pieces of prosciutto annually and had 60 million USD in revenues last year.

The Parma model is an exceptional blueprint for Drniš pršut manufacturers to reference as they move forward in promoting and protecting their brand franchise. A study tour that enables Drniš pršut producers to meet with the Parma consortium and IPQ representatives will result in the provision of valuable, first-hand exposure to an organization that many years ago addressed the issues confronting Drniš pršut producers today. In addition, Parma holds the more comprehensive Protected Denomination of Origin (PDO) registration and as such is able to provide expert advice and guidance to Drniš pršut manufacturers to facilitate the registration process and to communicate best practices in both processing and management. This will serve to minimize the time required to institute, as well as ensure the effectiveness of, control measures required to obtain PGI registration.

It is recommended that FI assist the Association and facilitate resources necessary to conduct the tour, whether from the Croatian government, private business sources or from the international donor community. FI will act as a potential liaison between the Association and the organization selected to conduct the actual study tour in order to maximize the overall effectiveness of the excursion, and ensure that key objectives and outcomes are properly formalized.

8.5 Raw materials procurement

Current ham procurement by the majority of the Drniš producers is based on low-priced, low-quality inputs from the EU and adjoining countries. These pigs are poorly fed, lack sufficient exercise and are typically of insufficient weight to be converted into high quality Pršut. Strengthening market linkages between pršut producers and domestic pig producers is critical to increasing the quality, and lowering the overall input cost, of Drniš pršut production.

FI recommends the implementation of a pilot program that will enable producers to domestically procure optimum quality raw materials while simultaneously developing a comprehensive tracking and monitoring system that will pave the way toward attainment of a geographical registration mark. As described above, given the very specialized and lengthy production process associated with the curing of traditional Croatian pršut, the only way that Drniš products can expect to survive long term in the market is to offer a premium product at a premium price. The achievement of such status requires that only high quality domestic ingredients be used in the production process. In the case of pršut, this requires the procurement of domestic pigs (ideally from Banovina or Slavonia) from a pre-determined breed that are at least 140 kilograms in weight at time of slaughter.¹⁶

To that end, FI recommends the implementation of a pilot program that will facilitate the Drniš pršut manufacturers ability to undertake such an initiative. Specific elements are as follows:

- Establish an agreement with swine producers in Banovina, Slavonia or Baranja to raise selected breed of hogs to an optimal weight of 140 kilograms;
- Establish defining features of the traditional manufacturing process and produce a manual outlining procedures to be adhered to by producers;
- Set up quality controls in order to regulate, inspect, monitor and track all aspects of the entire production process (including pig breeders, slaughterers, and processors);
- Obtain authorization from the Croatian government for marking and controlling swine and pršut production.

¹⁶ Recommendations provided by consultants Dr. Kovacic of the Zagreb Agricultural Faculty and Dr. Vet. Gorsa.

It is recommended that FI provide technical assistance to the Association toward the achievement of these goals, as well as to ensure that necessary legislative requirements toward the acquisition of the geographical registration are properly instituted. This will take place through the implementation of the following activities:

- For those pršut processors participating in the pilot program, FI will locate pig producers who are willing to raise pre-specified breeds of hogs to a weight of 140 kilograms. FI will then assist an agricultural Cooperative in coordinating slaughtering services, including associated feed and transport services;
- For those producers not participating in the pilot program, FI will assist the Association members in the acquisition of pigs and/or raw materials (domestic, when possible).¹⁷ FI has already contacted the Podravka Company, which has expressed interest in providing slaughtering services on behalf of Drniš pršut producers. Podravka has the capacity to slaughter 250 pigs per day and is willing to purchase any remaining parts of the pig that are not required for production purposes by Drniš manufacturers;
- Other options, such as a special reduced tariff program on pork procurements from Hungary (that was run last year and is planned again for this year) must be pursued, should domestic supply not be sufficient to meet processors' needs;
- FI will also assist the Association in securing preferential pricing that is possible by jointly organizing their purchasing activities, as possible;
- FI will use representatives of the Agricultural Faculty of Zagreb to ensure that quality control standards of procurement are met and to minimize risks that typically exist at the beginning of such business relationships.

FI recently arranged a trade visit of Drniš Pršut Association members to pig producers in the Dvor area, which resulted in the contractual ordering of 21 tons of pork for the next pršut-processing season. FI will continue to encourage such linkages on behalf of producers and processors in the war-affected areas of Croatia.

8.6 Packaging/Brand graphics

If Drniš pršut producers are to establish a stronger market presence and increase brand awareness, it is imperative that packaging be of international quality, and is composed of prominent and attractive graphic design standards. Shelf space in most stores today is dependent on the establishment of a graphic brand image that reinforces the corporate message of the producers, and of the industry as a whole. Customers must not only be aware that Drniš pršut has a long tradition of quality; they also must be able to recognize that fact on shelf.

FI will assist the Association in the development of a strong brand image that stands out on shelf and enables Drniš producers to communicate a cohesive appearance, while simultaneously reflecting the high quality image historically associated with Drniš pršut.

8.7 Technical Assistance Seminars

In coordination with the Association, FI recommends a series of targeted training seminars to build institutional capacity of the Drniš pršut processors. Additionally, measures should be undertaken to ensure that information gained from this analysis is properly communicated and

¹⁷ Most producers have procured necessary raw materials for the current year, thus the majority of efforts will focus on 2003 activities.

that the identified business challenges faced by Drniš producers are effectively addressed. One such seminar (focused on marketing and branding) has already been provided by FI. Additional seminars and technical assistance will be held in cooperation with the Association and domestic industry experts. This will gradually lead to stronger institutional capacity of the Association.

8.8 Mesopromet Drniš

FI has examined the current situation of the Mesopromet facility in order to provide local officials with accurate information about the status and potential of their local assets. As outlined in section 6 of this report, Mesopromet's bankruptcy status and lack of current purchase negotiations preclude any significant involvement by FI at this time. However, FI has engaged the consulting services of an environmental specialist to examine the impact of the full reactivation of the facility at its pre-war production levels.

The consultant expressed skepticism that a reactivated pig farm would be able to comply with newer and more stringent environmental safeguards imposed by recent changes to Croatian law. These new measures may significantly raise the cost of operating the facility. The facility's location near a populated area, just a few miles from a river draining into the sea and a fertile valley used for crop production, seem to indicate that extensive measures will need to be taken to avoid polluting the environment. Additionally, an increased focus on tourism in the area may cause local hostility to the prospect of Mesopromet's reactivation. In any case, in accordance with Croatian law, a thorough and detailed Environmental Impact Study will need to be undertaken before any reactivation of the pig farm is considered.

It is recommended that FI continue to interact with the bankruptcy court trustee overseeing the Mesopromet sale, as well as help facilitate possible purchase negotiations, should serious interest exist, between Podravka and the bankruptcy court. Although the viable use of the pig-raising facility is questionable, it has potential as a possible meat-processing center and thus continued dialogue should be maintained with the overall objective of sustainably revitalizing the local economy.

9. Conclusion

FI has conducted this analysis of the pršut industry in the municipality of Drniš in order to evaluate the present state of pršut production in the area, and to assess the feasibility of revitalizing pršut production to its pre-war level in an ecologically sustainable fashion. The analysis identifies existing market constraints that have hampered the development of the industry, and assists in developing measures necessary to raise production and profitability levels, which will in turn increase employment in the area. This analysis has been developed in response to a direct request by the municipal officials of Drniš.

FI believes that the industry has strong long-term potential for growth and development that will contribute to employment in the area. Therefore, FI has started an innovative technical assistance program designed to assist the Drniš pršut producers in overcoming their business challenges, including forming them into a registered industry Association designed to promote their craft and protect their interests. FI will continue to provide technical assistance to the pršut industry as a whole, as well as to individual processors in the Drniš area, within the context of the USAID-funded ECRA program in an attempt to revitalize the local economy.

Appendix A: Drniš pršut production process

Pršut is made from the fresh ham of a pig's hind legs, which are cut to precise specifications. Drniš pršut is a completely natural food - nothing is added except salt. All Drniš manufacturers are producing in accordance with traditional production processes that capitalize on a special mix of sea and mountain air, as well as frequent temperature changes and moisture oscillations which are specific to the Drniš area and which create optimal conditions for the fermentation of smoked ham ("Jugo" for the warm, moist conditions originating from the south and "Bura" for the dry, cold conditions originating from the north). It is the perfect combination of unique weather conditions that prevent a similar product from being replicated in regions outside of Dalmatia.

It is also these specific weather conditions that serve to control the optimum timing for the smoking of traditionally produced ham; a process that must take place between November and February. Only with an additional ventilation process, that most Drniš pršut producers insist adversely affect the quality of the end product, can this process be extended to include October and March.

The actual onset of the production process begins in October, with strict parameters surrounding the process and conditions through which the pršut must progress. First, immediately following slaughtering, the ham must be refrigerated at a precise temperature of +4⁰C, with the initial salting taking place within 72 hours (optimum is 36 to 48 hours) of slaughtering. After seven days the salting process is repeated, and depending upon weight, may be repeated an additional 1 to 2 times. Only natural sea salt is used in the production process.

Following the salting process, the hams are pressed for 7 days, after which time they are hung for smoking. In the middle of the smoking process, the hams are pressed once again for an additional 4 to 5 days to achieve desirable shaping conditions. In total, product is smoked from 35 to 60 days, dependent upon weight, size and technology.

At the completion of smoking, the pršut undergoes a fermentation process that lasts from 6 to 12 months, again depending upon the weight and size of the product. Optimal temperatures for this process are 18⁰ C, with humidity levels of 45 to 80 percent. During fermentation it is necessary to check the pršut every 20 days to ensure adequate control the production process, however, it is the natural microclimatic conditions of the area in which the dry, cold continental climate meets the warm, moist Mediterranean air that provide the ultimate conditions for achieving such a unique and flavorful tasting product.

Appendix C: Croatian Pršut Import Information

Import tariffs for salted, smoked and dried meat products

Tariff Number	Description	Unit	Ad Valorem rate (%)												
				EU	EFTA			BiH	Bulgaria	Czech Rep	Hungary	Macedonia	Poland	Slovakia	Slovenia
					Iceland	Norway	Switzerland & Liechtenstein								
0210	Salted, smoked and dried meat: Pršut	kg	10 + 170,1 €/100 kg	80% up to 300 tons	10 + 170,1 €/100 kg	10 + 170,1 €/100 kg	10 + 170,1 €/100 kg	0%	25	25	25	10 + 170,1 €/100 kg	10 + 170,1 €/100 kg	25	1% up to 450 tons

Historical export levels of dried meat, by country

	1995	1996	1997	1998	1999	2000	2001	2002
EXPORTS								
Pršut	17	33	18	45	19	15	3	15
- BiH	17	33	18	45	19	15	3	10
- Yugoslavia								3
- Slovenia								1
- Macedonia								1

*Note: 2002 figures are for the period January – June 2002

Historical levels of raw materials imports, by country

	1998	1999	2000	2001	2002 *
Fresh Pork Halves (in tons)	792	863	917	1.245	420
- <i>BiH</i>	218	100			
- <i>Hungary</i>	155	312	363	328	40
- <i>Holland</i>	85		19		
- <i>Czech Rep</i>	83				
- <i>Austria</i>	126	451	523	310	340
- <i>France</i>	125			105	
- <i>Slovenia</i>			12		
- <i>Italy</i>				5	
- <i>Germany</i>				497	20
- <i>Denmark</i>					20
Fresh pršut (raw, in tons)	1.013	1.158	758	954	428
- <i>Hungary</i>	410	433	219	698	133
- <i>Belgium</i>	220	179			
- <i>Austria</i>	263	136	140	133	258
- <i>Czech Rep</i>	37				
- <i>BiH</i>	77	18			
- <i>Italy</i>	6	10	34	22	2
- <i>Netherlands</i>		323	226		
- <i>Denmark</i>		12	118	85	16
- <i>Canada</i>		47			
- <i>Spain</i>			21		
- <i>Germany</i>				16	19

*Note: 2002 figures are for the period January – June 2002

Appendix D: Relevant Pork Production Information

Domestic Swine Levels

(in 1,000's)	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00	'01
Swine											
Pig Stocks	1,621	1,182	1,262	1,347	1,175	1,197	1,176	1,166	1,362	1,234	1,234
Slaughter						794	790	835	880	880	

Swine Stocks Source: Croatian Central Bureau of Statistics

Swine Slaughter Source: UN Food and Agricultural Organization

Imported Swine Levels

	'96	'97	'98	'99	'00	'01
Imports						
Live pigs (breeding)	N/A	N/A	1,943	490	1,231	1,279
Live pigs (butchering)	N/A	N/A	416	103	4,861	1,798

Source: Croatian Central Bureau of Statistics

Swine subsidies

Year 2002 Subsidies
SUBSIDIES FOR BREEDING PIGS
<ul style="list-style-type: none"> Registered pigs - 530,00 HRK per head Registered pigs (strategic area, i.e. war affected areas) - 720,00 HRK per head
SUBSIDIES FOR BREEDING OF PIGS (turopoljska and black slavonska only)
<ul style="list-style-type: none"> Female pigs - 250,00 HRK per head Female breeding pigs - 500,00 HRK per head Male selected pigs - 750,00 HRK per head
SUBSIDIES FOR BOARS
<ul style="list-style-type: none"> Artificial insemination boars - 1.500,00 HRK per head Natural insemination boars - 1.000,00 HRK per head
YEAR 2003 SUBSIDIES
<ul style="list-style-type: none"> Pigs for breeding - 300,00 HRK per head Pigs for slaughter - 100,00 HRK per head

Source: Croatian Livestock Selection Service

Appendix E: Croatian Swine Import Tariffs

Tariff Number	Description	Unit	Ad Valorem rate (%)												
				EU	EFTA			BiH	Bulgaria	Czech Rep	Hungary	Macedonia	Poland	Slovakia	Slovenia
					Iceland	Norway	Switzerland & Liechtenstein								
010391	Swine weighing < 50 kg	per head	10	80 % of MFN*	10	10	10	free	10	10	10	10	10	10	10
01039110	- for slaughter	per head	10	80 % of MFN*	10	10	10	free	10	10	10	10	10	10	10
01039190	- for breeding	per head	free	80 % of MFN*	free	free	free	free	free	free	free	free	free	free	free
0103911010	- for breeding	per head	free	80 % of MFN*	free	free	free	free	free	free	free	free	free	free	free
010392	Swine weighing > 50 kg	per head	10+52,8 E/100kg Max 47,5	80 % of MFN*	10+52,8 E/100kg Max 47,5	10+52,8 E/100kg Max 47,5	10+52,8 E/100kg Max 47,5	free	30	30	15 up to 2000 t	10+52,8 E/100kg Max 47,5	10+52,8 E/100kg Max 47,5	30	10+52,8 E/100kg Max 47,5
01039211	Farrowed Swine (had piglets at least once), weighing > 50 kg	per head	10+52,8 E/100kg Max 47,5	80 % of MFN*	10+52,8 E/100kg Max 47,5	10+52,8 E/100kg Max 47,5	10+52,8 E/100kg Max 47,5	free	30	30	15 up to 2000 t	10+52,8 E/100kg Max 47,5	10+52,8 E/100kg Max 47,5	30	10+52,8 E/100kg Max 47,5
0103921110	- for breeding	per head	free	80 % of MFN*	free	free	free	free	free	free	15 up to 2000 t	free	free	free	free
0103921120	- for slaughter	per head	8+41,2 E/100kg Max 47,5	80 % of MFN*	8+41,2 E/100kg Max 47,5	8+41,2 E/100kg Max 47,5	8+41,2 E/100kg Max 47,5	free	30	30	15 up to 2000 t	8+41,2 E/100kg Max 47,5	8+41,2 E/100kg Max 47,5	30	8+41,2 E/100kg Max 47,5
0203	Meat of swine, fresh or chilled														
020311	-Carcasses and half carcasses														
02031110	Domestic swine	kg	10+59,4 E/100 kg Max 44	90 % of MFN*	10+59,4 E/100 kg Max 44	10+59,4 E/100 kg Max 44	10+59,4 E/100 kg Max 44	free	30	30	25 up to 4500 t	10+59,4 E/100 kg Max 44	10+59,4 E/100 kg Max 44	30	10 up to 100 t
0203111010	Ex. half carcasses without skin, not fat	kg	10+71,6 E/100 kg Max 45	90 % of MFN*	10+71,6 E/100 kg Max 45	10+71,6 E/100 kg Max 45	10+71,6 E/100 kg Max 45	free	30	30	25 up to 4500 t	10+71,6 E/100 kg Max 45	10+71,6 E/100 kg Max 45	30	10 up to 100 t
0203111020	Ex. Half carcasses EU treat	kg	10+46,9 E/100kg Max 45	90 % of MFN*	10+46,9 E/100kg Max 45	10+46,9 E/100kg Max 45	10+46,9 E/100kg Max 45	free	30	30	25 up to 4500 t	10+46,9 E/100kg Max 45	10+46,9 E/100kg Max 45	30	10 up to 100 t
020312	- Hams, shoulders and cuts thereof, w/ bone in	kg													
02031211	Hams and cuts thereof	kg	10+65,9 E/100 kg Max 44,4	90 % of MFN*	10+65,9 E/100 kg Max 44,4	10+65,9 E/100 kg Max 44,4	10+65,9 E/100 kg Max 44,4	free	30	30	25 up to 4500 t	10+65,9 E/100 kg Max 44,4	10+65,9 E/100 kg Max 44,4	30	10 up to 100 t

Revitalization Analysis & Recommendations for the Pršut Industry in the Driš Municipality

Tariff Number	Description	Unit	Ad Valorem rate (%)												
				EU	EFTA			BiH	Bulgaria	Czech Rep	Hungary	Macedonia	Poland	Slovakia	Slovenia
					Iceland	Norway	Switzerland & Liechtenstein								
02031219	Shoulders and cuts thereof	kg	10+53,8 E/100 kg Max 44,4	90 % of MFN*	10+53,8 E/100 kg Max 44,4	10+53,8 E/100 kg Max 44,4	10+53,8 E/100 kg Max 44,4	free	30	30	25 up to 4500 t	10+53,8 E/100 kg Max 44,4	10+53,8 E/100 kg Max 44,4	30	10 up to 100 t
0203121910	Ex. Shoulders without fat	kg	10+60,9 E/100kg Max 42,5	90 % of MFN*	10+60,9 E/100kg Max 42,5	10+60,9 E/100kg Max 42,5	10+60,9 E/100kg Max 42,5	free	30	30	25 up to 4500 t	10+60,9 E/100kg Max 42,5	10+60,9 E/100kg Max 42,5	30	10 up to 100 t
02031290	other	kg	10+53,0 E/100kg Max 44,4	90 % of MFN*	10+53,0 E/100kg Max 44,4	10+53,0 E/100kg Max 44,4	10+53,0 E/100kg Max 44,4	free	30	30	25 up to 4500 t	10+53,0 E/100kg Max 44,4	10+53,0 E/100kg Max 44,4	30	10 up to 100 t
020321	Frozen:	kg													
02032110	- Carcasses and half carcasses	kg													
02032190	Domestic type	kg	10+42,6 E/100 kg	90 % of MFN*	10+42,6 E/100 kg	10+42,6 E/100 kg	10+42,6 E/100 kg	free	30	30	25 up to 4500 t	10+42,6 E/100 kg	10+42,6 E/100 kg	30	10 up to 100 t
020322	--Hams, shoulders and cuts thereof, w/ bone in type	kg													
02032211	Hams and cuts thereof	kg	8+60,8 E/100kg Max 35,7	90 % of MFN*	8+60,8 E/100kg Max 35,7	8+60,8 E/100kg Max 35,7	8+60,8 E/100kg Max 35,7	free	30	30	25 up to 4500 t	8+60,8 E/100kg Max 35,7	8+60,8 E/100kg Max 35,7	30	10 up to 100 t
02032219	Shoulders and cuts thereof	kg	8+41,3 E/100kg Max 36,7	90 % of MFN*	8+41,3 E/100kg Max 36,7	8+41,3 E/100kg Max 36,7	8+41,3 E/100kg Max 36,7	free	30	30	25 up to 4500 t	8+41,3 E/100kg Max 36,7	8+41,3 E/100kg Max 36,7	30	10 up to 100 t
0203221910	Ex. Shoulders without fat	kg	8+52,4 E/100kg Max 36,7	90 % of MFN*	8+52,4 E/100kg Max 36,7	8+52,4 E/100kg Max 36,7	8+52,4 E/100kg Max 36,7	free	30	30	25 up to 4500 t	8+52,4 E/100kg Max 36,7	8+52,4 E/100kg Max 36,7	30	10 up to 100 t
02032290	other	kg	8+44,3 E/100kg Max 35,7	90 % of MFN*	8+44,3 E/100kg Max 35,7	8+44,3 E/100kg Max 35,7	8+44,3 E/100kg Max 35,7	free	30	30	25 up to 4500 t	8+44,3 E/100kg Max 35,7	8+44,3 E/100kg Max 35,7	30	10 up to 100 t

MFN*= Most favored nation

Appendix F

*Prosciutto di Parma Consortium Overview*¹⁸

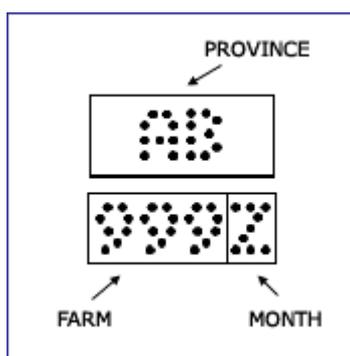
The *Consorzio del Prosciutto di Parma* was set up in by 23 producers in 1963 to protect the interests of producers, stockbreeders and traders involved in the production of *Prosciutto di Parma*. Today it has grown to represent 195 producers, 180 Abbatoirs and 5,500 breeders. With a domestic market share of over 40%, *Prosciutto di Parma* is the market leader of cured ham in Italy, producing in excess of nine million hams annually. Parma products are also distributed internationally in over 40 countries.

The mandate of the *Consorzio* is:

- To supervise, control and prevent fraudulent use of the geographical indication *Prosciutto di Parma* and the “Ducal Crown” trademark;
- To prevent unfair competition;
- To ensure full compliance with all requirements of Italian law¹⁹;
- To promote, and disseminate information about, *Prosciutto di Parma*.

In 1996, Parma ham was recognized as a Protected Denomination of Origin (PDO) product, according to European law. To obtain such status, the methodology for producing prosciutto had to be formalized and strict criteria adhered to. Every aspect of the production must be adhered to and tracked: from the areas where the pigs are bred and later slaughtered, to the methods used in curing the meat, and finally to the periods necessary for preserving it. The pigs must be bred in certain determined regions of Italy to a weight of at least 150 kilograms and be aged at least nine months. In addition, finished cured ham bearing the geographical indication of Prosciutto di Parma must weigh at least 7 - 9 kilograms.

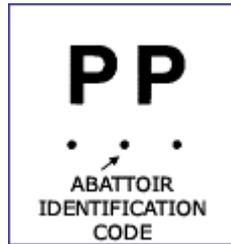
As indicated above, the PDO certification of the product is guaranteed by the "signature" at each stage, thus ensuring that all phases of the production cycle can be retraced and checked at any time. First, a special indelible tattoo is placed by the farmer on both hind legs of the pig; the tattoo identifies the farmer and the month of birth of the animal.



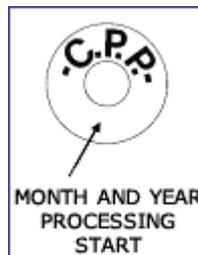
¹⁸ Source: Barilla magazine (http://www.barilla.com/magazine/barilla_news/news32.asp)

¹⁹ Since 1998, the IPQ (or Parma Quality Institute) oversees and certifies the quality of Prosciutto di Parma, a task previously performed by the Consorzio del Prosciutto di Parma. The IPQ functions under the terms of the European Community Regulation 2081/92 of 14 July 1992 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs.

The slaughterhouse, after testing each single fresh leg of meat, burns a mark onto the skin. This permanent brand identifies the leg by means of the letters PP (Prosciutto di Parma) and the abattoir.



The month and year of the beginning of processing are shown in relief, together with the letters C.P.P. (Consorzio del Prosciutto di Parma) on the metal seal making a circular crown.



Following this long certification process, meticulous verification that all production stages have been correctly performed and that the particular and unmistakable organoleptic requirements have been attained, the ham is marked by fire with the 5-point crown; the word PARMA is featured inside the crown oval. The letters beneath the crown identify the production site.

