Typical and traditional productions:
Rural effect and agro-industrial problems
52nd EAAE Seminar - Parma, June 19-21 1997

SILVIA SCARAMUZZI[?]

Tradition, cooperation and competition in the ornamental plants chain: the case of Tuscany

ABSTRACT

The paper aims at analysing the role played by tradition within the development of the structure of the ornamental plants chain in the Pistoia area (Tuscany) and the reasons, opportunities and limits to undertake specific actions for the promotion of the Tuscan nursery production.

After the analysis of the historical roots of the nursery production in the area, the paper proceeds with the description of the structure of the chain, with special reference to the characteristics and peculiarities of the organisational relationships among nurseries. These are key-elements to identify the opportunities and limits to the promotion of Pistoia ornamental plants. The fundamental role of tradition for the capillary development of a thick network of formal and informal relationships resulting from the diffusion of experience and the rapid flow of information among the agents of the chain is illustrated. All these elements together represent a very sound lever for a further and long-lasting penetration of the market.

[?] Dipartimento di Scienze Economiche, University of Florence - Via Curtatone,1 - 50123 Firenze

1. INTRODUCTION

The future of the agricultural sector in Tuscany greatly depends on the improvement of the qualitative characteristics of the products and on their enhancement through diversification. This should allow the consumer to perceive the effects deriving from the methods of production (and therefore from innovative or traditional inputs) and/or from the area of production (environmental factors).

Within product differentiation, typical products play a fundamental role in Tuscany. As a matter of fact, on the one hand they benefit from the favourable evolution of the taste of the consumer, on the other they have to face the penetration of the competitive products offered by the commercial distribution, which are often attracting in terms of price, quality and purchasing facility.

The situation is different for the so-called traditional products, that not having a formal recognition for their peculiarity, do not yet benefit from the same image in the eye of the consumer, who needs a greater effort to be sensitised to their value. Furthermore, some of them cannot even take advantage of the specific legislative instruments offered by the EU law.

This paper aims at analysing the role played by tradition within the development of the structure of the ornamental plants chain in Pistoia and the reasons, opportunities and limits to undertake specific actions for the promotion of the Tuscan nursery production.

In particular, our attention will be centred on ornamental plants, whose production has a high national and international image, thanks to the high quality of the product and the capacity of supplying customers integrated additional services. This image is rooted in a sound production tradition, which certainly represents the lever for the penetration of the market both at the national and international level [14].

The paper starts from the analysis of the historical roots of nursery production in the chosen area (par.2) and proceeds with the description of the structure of the chain, with special reference to the characteristics and peculiarities of the organisational relationships among nurseries (par.3). These topics represent the basis for the description of the opportunities and limits to the promotion of the product (par.4). The final part illustrates the fundamental role of tradition in view of the capillary development of a network of formal and informal relationships, resulting from the diffusion of experience and of a rapid flow of information among the agents of the chain. All these elements together represent a very sound lever for a further and long-lasting penetration of the market.

We chose the chain approach in order to be able to describe the aggregate of the economic and administrative agents, directly or indirectly present on the economic and technical path, followed by the product from the starting phase of production to that of utilisation. Consequently, the chain is intended as the complex of interactions among the activities carried out by the whole system of agents.

The acquisition of information was mainly based on the results of a specific survey carried out within the research "Agro-industrial observatory on Tuscany" held by Istituto Nazionale di Economia Agraria (INEA) and thanks to the MURST 60% contribution to the research "Analisi comparata degli strumenti interpretativi della realtà agricolo-industriale e loro interrelazioni".

As far as methodology is concerned, we adopted open qualitative interviews; a choice motivated by the fact that our goal was not so much to collect data, as to gather information on the situation and evolution of the relationships among the agents of the chain. This was also motivated by the fact that nurseries are usually very reluctant to give any quantitative information on their activity, mainly for a tax-related reason, that will be explained in detail further in the paper.

The selection of the individuals was based on the "critical case sampling" [3; 19; 20]. In other terms, the chosen interviewees are those who represent a key-element for the understanding of the matters covered by the study or have a particular capacity of influencing the characterisation of the chain. Therefore our aim was not so much to build a statistically representative sample, as to maximise information on a specific subject, using logic to generalise the information acquired.

2. THE ROOTS OF THE PRODUCTION OF ORNAMENTAL PLANTS IN THE PISTOIA AREA

The production of ornamental plants in the Pistoia area (Tuscany) has very old roots. As a matter of fact, there is general consensus in maintaining that the first plant nursery was created in 1849, when an ancient gardener decided to develop his own plant nursery business [9; 26]. It is important to underline that, on the one side, the activity was not born as an evolution of an agricultural one and that, on the other, the commercial activity was from the very beginning just as important as the agricultural one.

During the early 1900s nurseries continued to develop, although the activity obviously slowed down during World War I. During the Fascist period, owing to the prescribed goal of food self-sufficiency, the choice of the species to grow was mainly directed toward fruit plants.

At that time there was already an important awareness of the possibility of increasing market power through the supply of services to customers, whereby the larger ornamental nurseries already relied on specific resources such as architects and other specialists, to supply services to their customers (for example garden and park projects).

Only after World War II did a renewed interest in the production of ornamental plants emerge, and by the late '60s this accounted for about 70% of the nursery production in Tuscany.

During the 1970s and the 1980s the sector was in its most innovative phase. In particular, farmers began to develop the technique of cultivation of ornamental and fruit plants in containers [1].

At present Pistoia is the national and European leader in the production of “ornamental and landscape plants” and for this reason specialists often refer to it as “the European Capital of ornamental and landscape plants” [14].

In 1990, the last Agricultural Census counted 1,867 nurseries in the area for a total area of 3,107 hectares. These firms represented 74% of the Tuscan nurseries both in terms of number and area invested. Moreover, a relevant factor is represented by their continuous expansion: in two years they have increased in number by 37% and they cover 55% more area than before (EU Biennial Sample Survey 1993, 1995). In 1995, Tuscany reached the level of more than 34% of the total Italian production in value [18].

[1] This technique was first used to grow young plants, later it was used as a form of transplanting of average and large plants from the soil for easier commercialisation. Now for some plants the entire production process takes place in containers.

Such a concentration of plant nurseries is due to peculiar climatic and paedological conditions that make it possible to produce a wide range of extremely different species, typical of cold, or even tropical and subtropical climates.

Moreover, the physical structure of the soil makes it possible to carry out the transplanting with the ball of earth, which is a particularly important factor as it makes the rooting easier when outplanting, thus satisfying a high quality demand.

As previously underlined, the leading growing technique is now cultivation in container, which has led to a reconversion of an increasing quota of the traditional soil cultivation to meet the needs and desires of the private sector which, as we shall describe in detail further, requires inexpensive and diverse plant species, though insisting upon high quality as well.

This results in a partial loss of the competitive advantage Pistoia had in terms of better paedological conditions, as the cultivation in containers can be undertaken anywhere, independently of the peculiar characteristics of the soil.

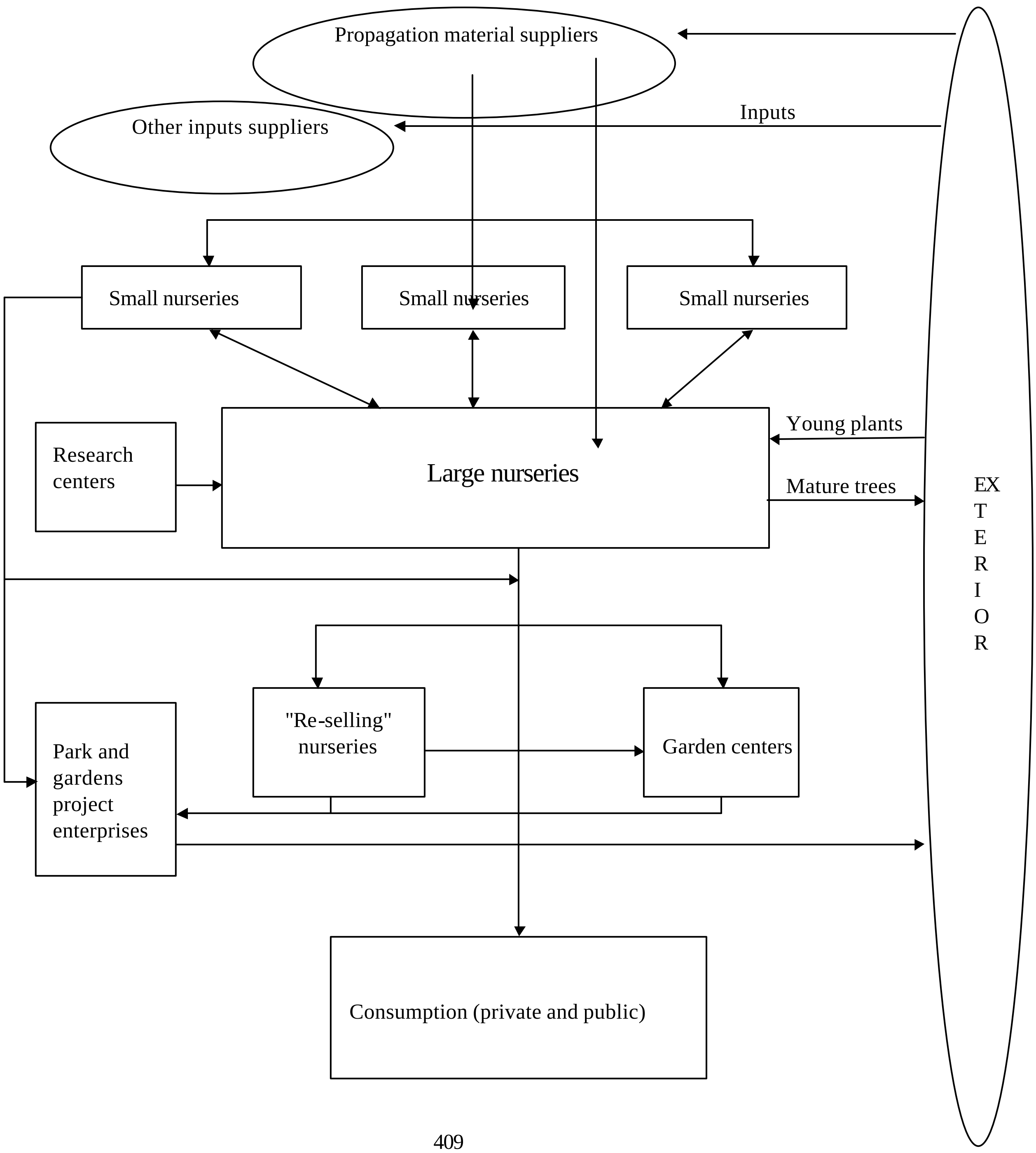
3. ORGANISATIONAL RELATIONSHIPS WITHIN THE CHAIN

3.1. The structure of the chain

The structure of the ornamental plant chain in the Pistoia area is not very articulated, mainly because its pre-eminent characteristic is that the different phases that go from production to commercialisation are typically integrated within farms (Fig.1).

Going from top to bottom, we can first spot the input suppliers who play a very important role, as the capacity of influencing demand - through product innovation - in the nursery activity mostly depends on the innovative characteristics of the propagating material. The agents lying upstream of the nurseries can be divided into: propagation material suppliers and other input suppliers.

FIG. 1 The ornamental plants chain in the Pistoia area



The propagation material suppliers are mostly foreign, while the local ones act as middlemen, selling material from abroad. As a matter of fact, Tuscan nurseries very rarely have a Research & Development sector and there are no important initiatives to produce propagation material either at the private or the public level in Italy. Obviously, this represents an important obstacle to the demand affecting potential of the nurseries.

Some of the other inputs, mainly represented by assets (greenhouses, machinery and other equipment[2], irrigation plants, vases), are mostly supplied by local producers and/or merchants, part of whom are highly specialised in the nursery activity and do not only operate in the area but in some cases are also leaders at the national and sometimes international level, as is the case of machinery and greenhouses.

Another part of the inputs (i.e. fertilisers, plant protection products, nets, peat) is supplied by local wholesalers who import them from abroad or from other Italian areas. They are the only suppliers for the nurseries which can lower in this way the high transaction costs they would incur in acquiring the different factors from single producers. These relationships are often characterised by a high degree of loyalty, thanks to the declared satisfactory price/quality ratio of the input.

Going downstream along the chain we can spot the nurseries, which play the dual role of producing and commercialising, though a specialisation process in the different stages of the production cycle is taking place, giving rise to a "vertical sub-division" of the activities [24].

The specialisation is fulfilled through the delegation of the first growing phase to small nurseries (SNs) by the large nurseries (LNs) who, keeping an effective control over the strategic functions, establish a form of subordination relationship.

The delegation can also take the form of the delivery of young plants to the SNs in order to grow them or the form of a verbal agreement to buy the product obtained. These plants are then further grown in LNs or directly commercialised.

An increasing number of LNs attach a growing importance to the commercial phase, though continuing to produce, even if often with the only goal of optimising taxation[3] and taking full advantage of public agricultural subsidies.

Therefore, the product usually reaches the consumer without a middleman. In some cases we can find garden centres, which are not as widespread in Tuscany as they are in Northern Europe and Northern Italy. The surprising results of our survey [24] show that the peculiarity of the Pistoia garden centres is that they are mainly generated by LNs, which decided to undertake this further activity not so much for profitability, but mainly to have a direct monitoring instrument over demand.

3.2. Organisational relationships among farms

The previous analysis shows how the key figures of the chain are LNs, that succeed in controlling the production phase and the commercial one at the same time. As a matter of fact, SNs have only a local market or in most cases they do not work for the market but exclusively for LNs,

[2] Special machinery for the nursery activity is produced in the Pistoia province.

[3] In Italy farms are only taxed on the basis of their cadastral income, thus enjoying a significant fiscal abatement as compared to commercial firms.

on which they are usually completely dependent both for the placement of their product and for price settlement.

In the organisation structure SNs play the role of sub-suppliers either occasionally or continually. The kind of sub-supply is in between what is called by literature capacity sub-supply and speciality sub-supply [2; 25]. In fact, in capacity sub-supply the contractor is endowed with the equipment and the specialisation necessary to develop the activity, but he uses other firms occasionally to face fluctuations of demand or other contingent situations[4]. On the contrary, speciality sub-supply is characterised by a high specialisation in a phase of the production process, that the contractor cannot develop himself, because of lack of equipment and capability. In the case of nursing activity, there is mostly a capacity sub-supply, but as we previously underlined a process of vertical specialisation in different phases of the process is taking place, wherein SNs almost exclusively deal with the first growing phase.

Although only LNs have control over the trade channels, being the only ones which have a selling organisation and sometimes a marketing strategy, most SNs are satisfied with the relationship they have with LNs as they usually minimise market risk, not having to sell their product on the market and being commonly tied to very sound firms. The presence of a such a micro-cellular structure on the part of sub-suppliers, is neither a contingent nor a casual phenomenon, being the result of the amalgamation of mutual financial and productive interests. In other words, the existing structure is the result of a tacit collusion between LNs and SNs [10].

Sub-supply farms offer LNs the opportunity of reaching a greater diversification of products and a higher structural and management flexibility. As a result, LNs succeed in adapting themselves to the fluctuations of the market and, last but not least, in concentrating their activity on commercialisation.

The choice of the optimum productive capacity is made by LNs on the basis of some limiting factors characterising the sector, the main one being the difficulty in foreseeing demand, the subsequent necessity of minimising fixed costs and therefore assets in order to retain flexibility.

The success of the tacit collusion is also due to the fact that the sector has never experienced a real crisis, so that the increasing demand has always allowed SNs to sell the whole product.

In fact, in such an organisational structure, a destabilisation of the market may be determined by SNs who, concerned with the unlikeliness of selling their product, decide to commercialise it directly at a very low price. The latter may be satisfactory for them, giving the low costs they incur compared to LNs [9], but not at all for LNs, since this may abruptly break the collusive equilibrium[5].

---

[4] Though LNs always claim to do business with SNs only to handle market fluctuations, we know that some of them have a continuous relationship with SNs and even give them some of the inputs in addition to technical assistance.

[5] Last January a mistake in demand foresight by one of the leader nurseries in Pistoia, which usually takes advantage of sub-supply on the part of various SNs, caused a very sharp fall in the price of a certain species. This was determined by the introduction on the market of a large quantity of product at a very low price by the SNs who did not manage to sell their product to the LNs, thus destabilising the market and provoking great unease both among LNs and SNs.

4. PROMOTING ORNAMENTAL PLANTS

4.1. The characteristics and evolution of demand

The demand of ornamental plants is characterised by the coexistence of two components: public or institutional demand and private demand. The former behaves in a different way compared to the latter, especially as far as elasticity to price is concerned.

As a matter of fact, public demand has still a quite high elasticity with respect to price, while private demand is more rigid. In other words, public demand is still influenced by the price of the different products offered and has a lower sensitivity to product innovation. On the contrary, private demand looks for a high quality product and within this segmentation is not very sensitive to price variations. This is also due to the difficulty existing in assessing the true value of every single product and in comparing one product from a nursery to another, which gives farms a wider degree of freedom in fixing prices. The asymmetric information existing between consumer and producer also results in a loyal relationship of the former towards the latter.

As far as the trend of the demand is concerned, a growing market is developing, both at the national and international level, although the Italian demand has lately experienced a slow-down, owing to a bad performance of the public component, due to the block occurred in public contracts for the well known "tangentopoli" (bribesville).

From a qualitative point of view, recent studies [13; 15; 16; 21; 22] have showed a significant change in the preferences of the consumer who is more inclined to buy species typical of the local environment or landscape. Demand is mostly directed towards small plants usually grown in pots (that have a lower price per unit) rather than the Pistoia typical large ornamental trees. This trend of the demand obviously represents a loss of power for the Pistoia production as a lever for the penetration of the market.

In spite of this, though a lower competitive advantage is present with regard to the product offered, the concentration of production and the peculiar organisational ties present in the production system, which is rooted in tradition and specialisation, offer a strong point to develop a program of promotion and diversification of the product.

The trend of the demand of ornamental plants seems to offer good opportunities to the Pistoia production, though customers often complain about the excessive fragmentation of production and the absence of an economic organisation of producers concentrating supply in order to make contacts with producers easier.

4.2. Commercial policy and product differentiation

The enlargement of the market both at a spatial and at a temporal level has changed the significant variables of competition. It is no longer sufficient to produce good quality products at competitive prices: it is necessary to qualify productions and make them recognisable [6].

[6] As far as ornamental plants are concerned, the specific instruments given by the EU legislation (Reg. CEE/92/2081; CEE/92/2082) are not viable.

Moreover, a recognised quality of production is not sufficient to ensure the placement of the product on the market and to obtain a high price, but must be accompanied by adequate marketing policies.

This is the common outlook on price differentiation and market penetration through the qualification of production. Unfortunately, the ornamental plant market has some peculiar characteristics that make this recipe not so easily and directly viable.

Fragmentation is the main characteristic of the distribution channels of ornamental plants coming from Pistoia. On the one hand, this ensures a capillary distribution of the product; on the other, it determines the absence of a common commercial policy and strategy and therefore of the capacity of penetrating the market influencing its demand [4; 24].

The problem is in most cases even more serious, because there is not even an individual commercial strategy. As a matter of fact, the survey carried out has proved how most LNs confine themselves to a product-oriented commercial policy, having the only aim of producing and selling a high quality product. They usually wait for the customer to find them and almost passively satisfy his requests adjusting the available product through sub-supply.

There are different methods ornamental nurseries adopt to differentiate their product in order to reach an added value. One of them used to be that of employing plastic vases imitating terracotta ones, that put together the positive aspects of lightness, durability, and unbreakability to a relatively high aesthetic value. At present this has become so widespread as to fail to represent a real differentiation variable. So now some nurseries use precious packages and vases for more valuable plants.

The most widespread differentiation policy adopted is based on the supply of services on the part of the nursery, often in the form of care information on the product through specific plastic labels, or even through the activation of an information service telephone number. Granting free transport of goods and outplanting is also quite common. A few nurseries, endowed with a complex organisational layout, offer a park and garden project service. Furthermore, though the strategic goal is that of obtaining high quality products, nurseries also obtain lower quality plants that sell at a lower price as a second choice. One of the leading Pistoia nurseries has decided to use this as a step further in terms of product differentiation and market segmentation, by advertising the availability of products of three different qualities and price levels.

A very controversial problem is the adoption of a brand name policy. In fact, on the one side this allows the nursery to widen the space of price differentiation through the exploitation of tradition and therefore quality of production, coming from the skill acquired during time. On the other side - especially if we consider a transnational destination of the product – a serious obstacle and negative point to brand policy is represented by the fact that the common customer of ornamental nurseries is usually another nursery often re-selling the product as its own.

Another explanation for the reluctance to be "identified" is a fiscal one. In fact nurseries benefit from the tax abatement and the facilities for payment and for credit granted to farms. Therefore the fact that they mainly carry out a commercialisation activity would deprive them of these benefits. It is also important to underline that these facilities are a further element that contributes to the high profitability of the sector, as they directly influence the production costs.

Only a few LNs endowed with a R&D activity added to the production one, base their penetration of the market on advertising. As a matter of fact, the capacity of creating new cultivar (cultivated varieties) and cultivarians (i.e. variety that is obtained by agamic reproduction and which differs from the original plant in bearing and foliage), gives them the opportunity to set a monopolistic price on their products, thanks to the patent rights they acquire through registration. Advertising is naturally a conditio sine qua non in order to get monopolistic profits.

4.3. Promotion of the product by State bodies

We have outlined the organisational productive and commercial structure of the ornamental plant nursery chain and emphasized the problem of the lack of any type of associative ties among nurseries in the Pistoia area. Our goal was to highlight the difficulty in developing and implementing a program of collective exploitation of the Pistoia area nursery production.

As a matter of fact, the only relevant attempt to attain this objective is a recent initiative of the regional public administration (Regione Toscana) to constitute a mixed capital society, called "Toscana Piante e Fiori" (Plants and Flowers from Tuscany), mainly financed by private capital. The aim is to promote Tuscan florist and nursery industry, supporting the activity of both private enterprises and State bodies operating on the territory.

The society constituted in October 1996 declared the following aims:

- carrying out market analyses to acquire information supporting the promoting activity;
- supporting advertising actions to promote the products and the image of the Tuscan florist and nursery industry and its territory;
- organising local product exhibitions and promotional events;
- organising the participation in Italian and foreign exhibitions and fairs;
- organising conferences, seminars and meetings to promote the local industry;
- supplying market organisational support.

The background

The constitution of the society was basically determined by the presence within the Regional Agricultural Program on nursery industry of the will to promote the sector through a specific organisation. A further reason was represented by the bad performance of another promoting instrument existing in the area, a public organisation, which is supposed to promote the local florist and nursery industry but confines itself to the organisation - with less and less success - of a biennial flower exhibition, thus neglecting the plant nursery industry as well.

As a matter of fact, the idea of the constitution of the new society has been mainly rejected by the florist industry. As far as the nurseries are concerned, very few have actually joined in and the general impression resulting from the interviews is that the ones who have, mostly did it fearing they might be excluded from an activity whose outcome is not predictable.

At present only 55 subjects (of which 36 are private firms) have adhered and the action of proselytising is still going on, unfortunately with modest results.

The problems

Once more, the main problem in the success of the society is that it is the result of a top-down initiative. In other words, the need to promote the product is not deeply felt by the producers, who are not yet market-oriented, and do not even seem yet aware of the necessity of forecasting demand[7].

A strategy of inward marketing, or promotion of the program within the sector, is being implemented but beneficial solutions are very difficult to find. In fact a policy of differentiation of the product may have a good result only if the producers have previously agreed on management rules and on those of promotion and self-control.

Moreover, the producers resent the political war existing between the two promoting organisations existing at the moment and this constitutes a deterrent to subscription.

Last but not least, SNs have not been involved in this activity, officially because they are represented by the producers organisations, in fact - we believe - because a greater power of SNs could alter the existing collusion equilibrium.

5. THE ROLE OF TRADITION

Time and tradition play a fundamental role in the organisational structure of the production of ornamental plants in Pistoia.

Over two centuries, a high number of nurseries - mainly small and average sized - has developed, giving birth to a relevant concentration of a specific production activity within a very limited area, which resulted in an outstanding territorial specialisation.

Though specialisation and typicality of production[8] are the first noticeable characteristics of the area, what is most fascinating about it is the characterisation of the closed relations developed among the agents along the chain as well as with other related enterprises (i.e. enterprises of park and garden architecture).

In other words, as we shall explain further, most of the elements of a district [1; 6; 11; 12; 17] seem to be present in the analysed area, though we believe that a specific survey ought to be carried out.

The agents acting on the territory share common cultural roots, which are important within interpersonal relations, as they contribute to a tacit definition of the codes of behaviour as well as to a univocal interpretation of the messages coming from the exterior [8].

The most important characteristic of these relations is a high level of stability and flexibility, mainly determined by the existent network of formal and informal contacts among the actors. This element probably provides one of the reasons for the competitive advantage held by the system until now. As a matter of fact, the system responds at a high level to the modification of the environment it interacts with.

---

[7] The impression which emerged during the survey, though not explicitly declared, is that producers, especially small and average ones, do not generally consider market information as a relevant variable. This might be due to the fact that SNs mostly produce what they are asked for and average ones adopt an imitative behaviour of LNs, which obviously determines a very slow response of supply to the signals of the market.

[8] The typicality of production is intended as the existence of a tight relationship - recognisable from the exterior - between the production itself and the territory over which it is developed [15].

The stability and flexibility of the relations as well as the fluent and diffuse information have increased the sector's potential to introduce innovation at both technical and organisational level.

This has been possible thanks to the presence of a widespread technical knowledge and to the fact that the system does not only learn by doing, but by interacting as well. In other terms, learning does not only take place within the farm, but also out of it, through the relations the entrepreneur establishes with his environment.

At a technical level, we must observe a rapid diffusion of both process innovation, which reduces the costs of production, and product innovation, which satisfies the increasingly complex private demand, requiring a more and more diverse product.

At the organisational level, a rare vertical sub-division of the structure of the farms has taken place. This has been enabled by the division of the production process in phases undertaken by different farms. The organisational innovation has been possible thanks to the technical one: in particular, the cultivation of plants in containers untied the close relation between the product and the soil on which it is grown.

Nurseries show a dual relationship of cooperation and competition. The cooperation may be "conscious" or "unconscious" [1], though the second type seems more widespread. The diffusion of the latter, as it develops without a codified interaction of the agents, implies a lower transaction cost. Moreover, the tacit cooperation of farms lying at different stages of the chain is counterbalanced by the high competition characterising the nurseries, especially the large ones, operating in the same phase, the commercial one in particular[9].

In summary, the proximity and locality of the production is not only important in terms of minimisation of the costs of transportation and communication [8]: it is also relevant on the one hand for the presence on the "territory" of human capital resources, with obvious implications on the collective learning curve and, on the other, for the existence of a network of formal and informal contacts among local actors, which determines a consistent fluency in the diffusion of information.

The success of the system is rooted in tradition, experience, closed relations and fluent information. This must be the lever for the penetration of the market, as the reproduction of agriculture depends on its capacity of controlling the placement of its product on the long distance, thus retaining its competitiveness with respect to other production systems [12].

It is certainly important to organise and codify all those relations that up till now have had an informal structure [6]. As a matter of fact, the future of the sector greatly depends on the capacity to build a formal network of enterprises, capable of promoting their product through structured channels. This is a goal that must be attained collectively and it is also a challenge for the most innovative and competent nurseries. They ought to understand the importance of such an organisation and then endeavour to face these changes, without losing that unity and cohesion rooted in tradition, that is at the basis of the competitive advantage characterising the sector.

[9] A very similar situation can be found in the agro-industrial district of pork meat in the Province of Modena (Italy) [7].

REFERENCES

[1] Becattini, G. (1994): La lezione dei distretti industriali, IRIS, Villa Medicea di Artimino.

[2] Bellandi, G. (1979): Le imprese di sub-fornitura: aspetti economico finanziari ed organizzativi Con particolare riferimento al settore calzaturiero, Università degli Studi di Pisa, Facoltà di Economia e Commercio, ETS, Pisa.

[3] Belletti, G., Iacoponi, L., Marescotti, A., Pacciani, A. Pagni, R., Rovai, M. (1995): Nuova agricoltura e nuovi agricoltori: la sfida dello sviluppo integrato (indagine agricoltura, agro-industria, turismo in provincia di Livorno), Provincia di Livorno, Livorno.

[4] Biamonti, A. (1993), Tra produzione e mercato: quale organizzazione per il florovivaismo, Atti del Convegno nazionale "Commercializzazione e Mercati nel florovivaismo", Panorama Floricolo, n.5-6, Piacenza.

[5] Bianchi, P. (1989): Concorrenza dinamica, distretti industriali e interventi locali, in Gobbo, F. (care of): Distretti e sistemi produttivi alla soglia degli anni ’90, pp. Franco Angeli, Milano

[6] Bianchi, P. (1991): Presentazione, in Cresti, B. (1991) Il vivaismo ornamentale. Innovazione e crescita di un settore tradizionale, pagg.7-8, Studi e Informazioni, quaderno 35, Banca Toscana, Firenze.

[7] Brigo, L., Fiorani, L., Gatti, S. (1992): Un distretto agroindustriale: l'attività di trasformazione della carne suina nel modenese, pagg.83-115, La Questione Agraria, n.45, Milano.

[8] Camagni, R. (1989): Cambiamento tecnologico, "milieu" locale e reti di imprese: verso una teoria dinamica dello spazio economico, Economia e politica industriale n. 64, pp.209-236, Bologna.

[9] Cresti, B. (1991): Il vivaismo ornamentale. Innovazione e crescita di un settore tradizionale, Studi e Informazioni, quaderno 35, Banca Toscana, Firenze.

[10] Cresti, B., Scaramuzzi S. (1994): La filiera piante ornamentali, in Pacciani A. (care of) L’agricoltura Toscana in un sistema che cambia: un’analisi per filiera, pp. 111-117, Studi e Informazioni, Quaderni 46, Banca Toscana, Firenze.

[11] Fanfani, R., Montresor, E. (1991): Il sistema agroalimentare: filiere, multinazionali e la dimensione spaziale dello sviluppo, pp.165-202, La Questione Agraria, n.41, Milano.

[12] Favia, F. (1992): L'agricoltura nei sistemi produttivi locali, pp. 109-136, La Questione Agraria, n.46, Milano.

[13] Ferretti, R., Gabrielli, F. (1994): L’indagine sulla domanda di piante ornamentali nei principali paesi europei, Floricoltura, n.4, pp.89-100, Pescia (PT).

[14] Ferretti, R. (1987), Lo sviluppo e la qualificazione della capitale europea del verde, Pistoia Programma, n. 49, pp. 50-53, Pistoia.

[15] Ferretti, R. (1990): Osservatorio del mercato vivaistico: l'indagine sulla domanda pubblica, Pistoia Programma, n. 9-10, pp.20-24, Pistoia.

[16] Fochi, S. (1997): Le caratteristiche e le prospettive della domanda di piante onramentali. Analisi in un'ottica di marketing. Tesi di laurea in Economia Agraria, Università degli Studi di Firenze, a.a. 1995-96, Firenze.

[17] Iacoponi, L. (1990): Distretto industriale marshalliano e forme di organizzazione delle imprese in agricoltura, pp. 379-431, Rivista di Economia Agraria n.4, Roma.

[18] INEA, (1996): Annuario dell'agricoltura italiana, Il Mulino, Bologna.

[19] Pagni, R. (1996): Agricoltori e sistemi economici locali. Il caso della floricoltura di Pescia, dissertazione finale di Dottorato di Ricerca in Politica Agraria, Università degli Studi della Tuscia, Viterbo.

[20] Patton, M.Q. (1987): How to use qualitative methods in evaluation, Sage Publications, Califomia.

[21] Provincia di Pistoia (1995): Seconda indagine campionaria sulle tendenze del mercato dei prodotti vivaistici, Agriprogram s.a.s., Firenze.

[22] Provincia di Pistoia (1990): Osservatorio del mercato vivaistico, La domanda di materiale vivaistico espressa dai progettisti del verde, Agriprogram s.a.s., Firenze.

[23] Saraceno, E. (1992): Il distretto delle barbatelle, La Questione Agraria, n.46, pp. 209-231, Milano.

[24] Scaramuzzi, S. (1996): Struttura produttiva e rapporti organizzativi nel vivaismo ornamentale, in Pacciani A. et alii (care of) Agricoltura toscana e sistema agro-industriale Caratteristiche strutturali e rapporti organizzativi, pp.357-378, Inea - Osservatorio di Economia Agraria per la Toscana, Osservatorio agro-industriale per la Toscana, Primo Rapporto Annuale, Firenze.

[25] Vennin, B. and De Banville, E. (1973): Pratique et signification de la sous-traitance dans l'industrie automobile en France, Cordes-Cresal, Saint Etienne.

[26] Vezzosi, C. (1990): Il vivaismo pistoiese, Centro Studi per il vivaismo, Pistoia.