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Non-sectoral agents and recent changes in Argentina's agricultural sector

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This article explores some of the changes that Argentina's agricultural sector has undergone in the past decade, before going on to analyse the structure of the production sector for a non-traditional crop, the blueberry, in the province of Entre Ríos. This crop is unusual in that it has been adopted chiefly by entrepreneurs from outside the local area and shows alternatives in terms of diversification of production and vertical integration. Capital investment is more important in blueberry production than investments of land, and information and management technologies play an important role. These are also features of the recent development of traditional crops in non-Pampas areas. The role of capital from outside the sector is worthy of consideration, given the flexibility and versatility made possible by some of today's production methods.

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I

Introduction

This article analyses the role played by non-sectoral capital and agents in Argentina's agricultural development after the peso-dollar link was abandoned and economic policy was altered in response to the profound political and institutional crisis in late 2001. Central to the new economic policy was a sharp currency devaluation, which involved a repositioning of export activities: those in which Argentina had traditionally been competitive (grains and meat) were strengthened and opportunities were created for innovative products introduced prior to 2001 that were showing strong growth at the time.

The article initially looks at the main changes in the agricultural sector and goes on to analyse the distinctive characteristics of those involved in blueberry production, one of the main hubs of which is the province of Entre Ríos. Based on this analysis, a number of factors are identified which could be applied to the development of Argentina's agricultural sector as a whole. The article concludes by considering some of the policy implications.

II

Production growth and non-sectoral capital in field crop production

After a decade-long policy of deregulation and liberalization, together with convertibility (the peso-dollar link), the change in macroeconomic conditions and attempts to redefine the role of the State have not altered the fundamental role played by Argentina's agricultural sector in the country's economy. Instead they have highlighted the sector's importance in generating foreign exchange and shoring up government expenditure.

Annual field crops continue to dominate the crop basket. The development of the soybean segment, where 16 million hectares are currently planted, is reflected in its share of exports. The soybean's development was made possible by an expansion in the agricultural frontier and a new "technology tier" (Flood, 2005) resulting from the widespread use of no-till and genetically modified varieties resistant to the herbicide glyphosate. As soybean output has expanded, livestock has been relegated to marginal areas and in some cases is now bred intensively. Meanwhile, less conspicuously, there has been an expansion in non-traditional crops, many previously unknown in Argentina, which are targeted at segmented markets.¹

However, this general picture masks a profound transformation in the types of agents involved in agricultural production, the relations between them and their linkages with other phases of production. Significantly, the number of producers declined between 1988 and 2002, with the loss of more than 80,000 farms (representing a quarter of the number in existence in 1988), most of them small or medium-sized farms. Also noteworthy is that the number of people working in farming fell by 460,000, with the result that, in 2001, they represented only 34% of the total number employed in agriculture in 1991. The two processes are no doubt connected: even though the decrease in direct agricultural employment has partially been offset by an increase in industrial employment and in jobs in farming-related services, clearly this decline in the

production of high-value non-traditional food products in recent years. Defined as foodstuffs which Argentina was not exporting in significant quantities 15 years earlier but which were fetching a minimum export price of US\$ 500 per ton, in the period from 1992-1993 to 2002-2003 the export value of such non-traditional foodstuffs grew in both absolute and relative terms from US\$ 533 million to US\$ 1.107 billion, while their share of the total agroindustrial sector rose from 7.4% to 8.6%.

¹ Obschatko's analysis (2004) points to strong growth in the

number of farms is associated with the crowding-out or departure of production agents from the sector.²

A number of studies conducted while the deregulation and liberalization policy was under way (Lattuada, 1996; Murmis, 1998) showed that this policy had increased the amount of capital needed to remain in the production process, leading to significant increases in the scale of operation. This change in macroeconomic conditions is still too recent to allow us to assess the extent to which such a process can be reversed or, more realistically, how far it can be curbed. In any case, the technology package employed for a number of agrifood products requires high-powered machinery and inputs from outside the farm, which calls for greater financial resources and so increases the scale.³ There has been a shift from relatively extensive to intensive production, increasing the capital required by each production unit.⁴ The increasing dependence on non-farm agents, compounded by the process of capital concentration and centralization currently at work in the processing and distribution links in the chain and in the supply of seed, can also be seen as a gradual loss of autonomy by agricultural producers (Lattuada, 2000; Teubal, 2006).

Bisang and Gutman (2005) attribute the expansion of several of Argentina's agrifood products to their

clear integration into international markets, the use of foreign technology packages, the organization of interlinked and coordinated groups of enterprises (clusters) and the consolidation of large enterprises in the main production phases. This has led to the formation of two types of production chain: large-scale externally-oriented chains and small to medium local or regional chains responsible for much job creation which, at best, operate at the minimum threshold for staying in business.

In terms of the agricultural structure, the above factors show that what has occurred is not merely a decline in the number of production agents, but also qualitative changes in the structure itself caused by a combination of three processes: a change in the relative importance of the different strata, a change in the profile of some existing producers and the emergence of new actors. These processes have arisen not only in Pampas areas but also in north-western and north-eastern Argentina as the soybean and other traditional Pampas crops have spread into these non-Pampas regions.

Clearly, we should avoid the temptation to define these changes as an irreversible "before and after". However, the growing importance of leasing within the land-tenure system, as well as the expansion of Pampas-region producers into non-Pampas regions, in large measure associated with putting leased land into production, have led to major changes in some types of agent, whose links with their farms and areas of origin are increasingly tenuous. These are changes in agents' behaviour and in the relations which they establish with their environment.⁵

Much the same applies to the share of investment funds in the agricultural sector. Investment funds raise capital from a variety of investors, are able to optimize the use of resources and can reduce risk by investing in crops at different latitudes. As Posada and Martínez de Ibarreta pointed out (1998), the concept of investing a specific sum of capital to put a specific acreage into production is nothing new to farming in the Pampas region: the first "sowing pools" date back

² Some analysts (Reboratti, 2005; Barsky and Fernández, 2005) point out that in the Pampas region, the concentration of production has not resulted in an equal concentration of land ownership, since some small and medium producers have been able to lease land. It is also true that, while the working capital has not been completely liquidated, in theory they can still return to direct production. Even so, the concentration of production is still an important issue, since it affects the intensiveness of resource use and the type of agricultural structure, as discussed later in this article.

³ Obschatko (2003, p.124) argues that "this new production model impacts on the social organization of production. It is appropriate and necessary to scale up, given the size of the machinery and the widespread technique involved [no-till], which requires no major adaptations. While technical advice becomes more necessary because of the size of the operations involved, the larger scale means that its cost can be absorbed. The volume of harvests and the capital invested make it necessary to cover risks in futures markets. In the new model, the input of professional services is therefore greater. *The working capital involved requires the participation of many investors, who are not necessarily the landowners... These changes call for a larger number of actors, many from outside the farming sector.* This increases the multiplier effects on other activities, particularly service activities." (our italics).

⁴ Some authors believe that this trend is not confined to the soybean subsector alone but, to a greater or lesser extent is present in all the branches of agricultural production, both in the Pampas region and in the regional economies. "According to this technological paradigm, soybean expansion is therefore only one example of this trend" (Slutzky, 2005, p. 61).

⁵ Even though these changes had not yet been fully reflected during the 2001/2002 crop year (the reference period for Argentina's 2002 National Agricultural Census and prior to the recovery of the Argentine economy), it should be noted that, as Slutzky states (2006), compared with 1988 there was a hefty increase of 2.6 million hectares in the wholly-leased acreage, coupled with a steep rise in the number of farms using a combination of owned and leased land, with a total of 8.6 million hectares under this combined regime. This led to a large increase in acreage per management unit.

to the mid-1970s, and in the mid-1990s their activities were extended and their organization improved. However, by the late 1990s they had practically disappeared. Following devaluation in early 2002, their ability to raise non-agricultural capital, make optimum use of production resources and reduce risk by investing at different latitudes allowed them to resurface in a more formalized manner as part of an economic policy to foster export activities, in a context where financial investment options are limited or have a disappointing record.

Some of these agents use trust funds to raise the capital required for projects calling for higher per-hectare investments.⁶ The designated administrator leads the effort. Most of the investors are institutions, but the relative share of private individuals appears to be on the increase. They invest sums of between US\$ 10,000 and US\$ 50,000, and many are urban professionals who have decided to invest part of their savings in agriculture.

The advantages of a trust are that: (i) bankruptcy of the operators does not affect the beneficiary's rights, as the assets are separate; (ii) economic agents can obtain funds in the capital market at a lower cost than with more traditional alternatives; (iii) in the case of a public offering of shares (financial trusts), the investor's risk is lowered by the rating agency's verdict, and (iv) the investor receives tax benefits (Santamaría Suárez Lago, n/d). In financial trusts, the trustee is either a financial institution or a company specially authorized by Argentina's National Securities Commission, and the beneficiaries are the holders of certificates of beneficial ownership or debt securities, which can be put out to public tender and so are listed on the stock exchange (Act No. 24,441).

These systems have also been adopted by the producer-contractors of days gone by which have not redefined themselves. As the record of some of its more high-profile members has shown, their activities date back more than two decades.⁷ However, the trend

⁶ "What has happened is that the law has matured a lot and some refinements were made to turn the trust into a valid instrument without too many dark corners. It has triggered a lot of economic activity.... As a general rule, the financial market is not at all attractive to anyone with spare cash to invest at present; instead they prefer to invest it in the real economy, which is very good ..." (comments by a trust manager interviewed in 2006).

⁷ Los Grobo is currently one of the largest local grain producers, with 150,000 hectares under cultivation (compared with 3,000 hectares in 1984). It owns 15% of that land and the rest is leased on a percentage basis. The company owns mills and a number of silo plants, has expanded into Uruguay and Paraguay, employs 400 people and

in recent years seems to be an increase in the acreages worked and leased by these producer-contractors, their expansion into non-Pampas areas and even neighbouring countries, and the use of new strategies in which management and marketing play a key role, with the aim of capturing investors from outside the sector.

This might indicate that, to varying degrees, some of these agents took advantage of a set of favourable circumstances: the opportunities afforded by the legal and financial framework, with instruments such as those described above; the benefits of technology applied to the soybean, such as no-till, which has cut operating times; the crisis faced by huge numbers of small and medium-sized producers, especially in the latter half of the 1990s, which led to heavy indebtedness and falling land prices, and the subsequent recovery of export crops thanks to external demand and the devaluation.⁸

Based on the changes described, Piñeiro and Villareal (2005) identified five ways in which production is organized in the Pampas region and in non-Pampas areas into which soybean production has expanded:

- (i) Contractors who own no land and therefore have to lease it;
- (ii) Landowner-entrepreneurs who own land, unlike contractors, and can expand beyond their local areas;
- (iii) New tenant farmer-entrepreneurs who neither own land nor have much capital, and therefore take advantage both of the available mechanisms for raising financial capital and of their own technical knowledge and management capacity, which are their strengths;

invoices an annual US\$ 150 million from its activities in production, agricultural marketing and services to third parties. MSU is another large company whose production comes from a combination of owned and leased land. It farms more than 90,000 hectares in Argentina and Uruguay, 80,000 hectares of which are leased, and hires services; it is also involved in livestock production and has 10,000 head in Buenos Aires and Corrientes, where it has 120 employees. Even though MSU started up in 1999, the family owning the company seems to have had links with the agricultural sector for several generations. Another company is El Tejar, which began in 1987, farms 180,000 hectares of leased land in Argentina, Bolivia, Brazil and Uruguay, and employs 134 people directly and 1,078 people via the associated network. Although strictly speaking El Tejar has no owned land, it leases some of the land which it manages from the company's owner families, and the services needed to put the land into production are hired from third parties (data from *Revista Apertura*, 2006; *El Federal*, 2006).

⁸ This phenomenon shows some continuity with the intensification of production in the first half of the 1990s, fostered by a combination of growing international demand, technological advances and the entry into the agricultural sector of capital from outside the sector in the form of sowing pools and investment funds seeking positive returns (Posada and Martínez de Ibarreta, 1998).

- (iv) Promoters of short-term investment of external capital in the farming sector (pools);
- (v) Vertically-integrated farming enterprises that also operate in the agricultural input and/or product market, a field in which they began their business and which is their core activity.⁹

Strictly speaking there are not five ways of organizing production since, operationally speaking, investment promoters are clearly linked with the new tenant farmer-entrepreneurs (type iii) and also with the other types. The system used by the new tenant farmer-entrepreneurs is of special interest: it is a sort of “managed” sowing system for which financial resources are raised, the land is leased and many of the services needed to start production are hired. All this makes the new tenant farmer-entrepreneur a sort of “contract manager”.

Some of the production systems currently in operation appear to be reflecting a divide between farming and the local area, with major social and environmental effects.¹⁰ This phenomenon had already been identified in other production contexts. For instance, Hervieu (1991) spoke of discontinuities in the French farming world, saying that in many cases farming had lost its local

or native character.¹¹ Nevertheless, it is striking to see this phenomenon emerge in post-devaluation Argentina, based on the injection of financing from outside the agricultural sector.

These systems also reveal the importance of liquid capital, which can be channelled rapidly for different purposes, as well as the growing application of management techniques to the various production phases. Authors like Obschatko (2003) consider that “soft” technologies are now essential for farming enterprises: this applies to the evaluation of alternatives and the definition of strategies in the areas of business, finance and production chains.

The concept of undertakings using capital from outside the sector merits further examination, whether or not they take the form of “new actors”, given the flexibility and versatility of some of the production systems currently used. This article will analyse some of the characteristics of production growth, not only for traditional field crops, but for a crop targeted at a market niche that was virtually unknown in Argentina barely a decade ago –the blueberry– which is grown mainly in the provinces of Buenos Aires, Entre Ríos and Tucumán.

III

Production growth in a non-traditional crop: the blueberry in Entre Ríos

The development of the blueberry in north-eastern Entre Ríos is fairly typical of the processes in operation in Argentina: blueberry production gathered speed following Argentina’s currency devaluation; it requires large-scale investment; the agents embarking on blueberry production come from outside the farming sector and, in some cases, use capital-raising mechanisms like those mentioned earlier. At the same

time, there have been few studies of the social and productive aspects of blueberry growing, as it is an innovative product targeted at a market niche for off-season fruit in developed countries (primarily the United States).

There were two pioneering blueberry producers in Entre Ríos, especially in the department of Concordia. They started up in 1997, only a few years after the crop had first been introduced into Argentina (the first exports date back to 1993, with a negligible volume of three tons). The two producers started with small

⁹ Flood (2005) also mentions the emergence of a new profile for productive agents, radiating outwards from the Pampas region towards the rest of the country, stating that it is unclear whether this predated the process of agricultural expansion or caused it.

¹⁰ This article does not make an in-depth analysis of this issue, which is of particular importance to non-Pampas areas. See Reboratti (2005), Slutzky (2005) and Teubal (2006).

¹¹ “Today, the phenomenon of displacement already noted in industry and commerce is beginning to make itself felt in farming (...). A further aspect of the displacement process is that large-scale farming is not tied down to specific areas” (Hervieu, 1991, p. 294).

acres (five hectares and half a hectare, respectively) and experienced all the problems typical of an activity with few precedents either in Argentina or in Entre Ríos. However, over time the two producers managed to expand the acreage under cultivation. Neither of the two pioneers came from the farming sector: one worked in a forestry company and the other was an insurance broker, a business in which he continues to this day.

Blueberry cultivation in Entre Ríos and the country as a whole expanded rapidly from 2002 onwards, when the macroeconomic conditions changed and there was an upturn in the agricultural export sector. In Argentina over the past five years the blueberry has fetched the fairly high average price of US\$ 10.7 per kilogram (f.o.b.). In the latest crop year (2006), production is estimated at 6,000 tons. Merchants and nursery farmers (producers of nursery plants) promoted the development of the crop by highlighting the agro-ecological suitability of north-eastern Entre Ríos.

According to data from a 2006 survey,¹² 70% of the producers in Concordia started planting the blueberry in 2002 and now some 1,200 hectares have been planted with the crop. However, the most striking feature of this expansion is how much it has been associated with the growth of medium and large enterprises. That is to say, even though agents with small acreages continued to plant the blueberry, even on land areas measuring less than the economically viable unit (initially estimated at five hectares), 55% of blueberry producers are enterprises with more than 15 hectares under cultivation. Large enterprises with more than 40 hectares under blueberry cultivation include two from Chile and one from the United States.

The capital investment involved can easily be quantified on the basis of planting costs per hectare that ranged from US\$ 15,000 to US\$ 35,000, excluding land. Official estimates for the region show that nursery plants represent a substantial 34.5% of the total cost (Jaime and Fassi, 2002). One reason is the high planting density required (3,333 plants per hectare) and the characteristics of the input, which in some cases is produced by means of micropropagation techniques. Some are patented varieties, which makes them more expensive. In addition, the fact that the crop developed over a fairly short period of time created high demand

for the input and at the same time gave high visibility to the process of production growth.¹³

A significant feature is the non-local origin of the owners of such enterprises: if foreign-owned enterprises are added to enterprises whose owners reside in other provinces, we find that a total of 60% of owners reside outside the production area. Craviotti and Cattaneo (2006a) analysed what this implies in terms of relations with the local environment and found that, whereas local producers bought their irrigation equipment and agrochemicals locally, non-local producers were more likely to buy them from outside the area and to issue tenders to a variety of bidders. In the case of nursery plants, producers in general, but especially those of non-local origin, tend to choose suppliers from outside the region.

In addition to the scant presence of local agents in blueberry cultivation, only a fairly small proportion of the producers already operating in the area are diversifying to include the blueberry or converting their crops wholesale (Craviotti and Cattaneo, 2006b). Also, the fact that not even one third of blueberry producers have a farming background (either inside or outside the region), added to the fact that they embarked on blueberry cultivation after 2002, indicates that many were investors who had spotted the opportunities afforded by the new situation in the agricultural sector, particularly for a non-traditional crop like the blueberry.¹⁴

Among these production agents, who include no examples of family-run production (although the family does participate in crop-related activities to varying degrees), investments in nursery plants and irrigation technology, and in some cases packaging plants, are

¹² The information was drawn from semistructured interviews with producers conducted in April and May 2006. The purposive sample included 57% of the farms identified and accounted for 67% of the total acreage planted with blueberry.

¹³ The interviews show that farms tend to apply a fairly consistent technology model, using early varieties, drip irrigation and frost-protection systems. Where it differs is in the combination of varieties chosen, the frost control technology used (flippers, full sprinkler irrigation or inverted sinks) and the use of anti-hail nets, as well as in the proportion of planted acreage where these technologies are present.

¹⁴ It was common to find analyses in the media, as well as in technical journals and conferences, mentioning the high prices obtained for blueberries in the international market, as well as the expected return on investment. This is reflected in the following sentence in a trust brochure written about blueberry cultivation: "*In terms of current income, a cumulative return of around 1,000% on the sums invested can be expected between the fourth and the twentieth year.* For example, a person investing \$10,000 would receive an estimated total return of \$100,000 over the first 20 years of the investment, equivalent to an annual income of 23% on a fixed-rate savings deposit of an equal amount. (...) The values illustrated have been projected on the basis of figures lower than actual returns in the past. *However, they do not constitute a guarantee of future returns*" (our italics).

combined with the soft technologies mentioned earlier. These soft technologies include conducting a pilot project prior to start-up (partially linked with the setting up of trusts), scheduling investments, seeking some degree of integration among stages in the value chain (packaging and/or marketing), analysing business options and consulting technical experts on a continuing basis, which sometimes includes visits to farms by foreign specialists. While the important role played by technical experts and managers, some of whom are very closely associated, makes soft technologies highly representative of a more professionalized style of farming, at the same time it raises questions about how far farm owners have assimilated these technologies personally.

Even though return on investment is the factor common to all the various production strategies, an analysis of the interviews suggests a conflict between a very short-term rationale based on the rapid capture of speculative profits and an approach that sees it as a long-term business. A number of informants and producers feel that the foreseeable drop in the blueberry price will lead some producers to abandon production, whilst it will induce others to formulate strategies for capturing new markets and/or differentiating the product, or else to develop coordination mechanisms to gain more organized access to markets, something that is just starting to be seen in blueberry production in Entre Ríos.

As the legal form of organization for these enterprises is predominantly that of a company, it allows people to belong to more than one company or be associated with more than one farm. Basualdo (1996) analysed the morphology of companies in the Pampas-region farming sector and its implications for the concentration of farmland ownership. These companies can also be viewed from the standpoint of the horizontal and vertical production linkages that their incorporation allows. The resulting "production groups" pool resources and jointly negotiate the purchase of inputs and the sale of products, thereby obtaining greater business advantages (Craviotti and Cattaneo, 2006a). To some extent, the existing concentration of production is further boosted by this type of multiple ownership situation, although the production chain can still not be described as highly interlinked or coordinated.

There are also innovative mechanisms for capturing small investors, which indirectly increases the number of people associated with blueberry production. To make such heavy investments as the ones described, in some cases joint ventures have been formed with nursery farmers, who provide the nursery plants, and similar

arrangements have been reached with input suppliers and machinery contractors. However, in some instances trusts are set up, in which case the fund contributors (trustors) are not linked to the production activity and delegate its administration to the trustee, who has wide-ranging powers for managing business activities.

In the case under study, they are common (non-financial) trusts, in other words, private contracts.¹⁵ An analysis of the interviews reveals that such trusts were set up by financial or insurance companies; in other cases, they were created by people who had entered into blueberry production either directly or by creating companies, and who later decided to set up trusts to expand their business. The minimum funds invested range from US\$ 5,000 dollars to 50,000, with no upper limit. As the blueberry is a perennial crop, the term of these trusts is relatively long, compared with those for field crops: as a general rule they are set up for twenty years.

As regards the business sector, the predominance of medium-sized to large enterprises in blueberry cultivation in Entre Ríos does not preclude diversity within the production sector. In order to examine this diversity, a typology was drawn up so that hypotheses could be made about the local impact of the development of the various types of blueberry producer. Three variables were used: size (greater or less than 15 hectares, considered as an approximation of the current economically viable unit for blueberry cultivation); diversification of production (single-crop producers or diversified producers), and source of funds (local or non-local). Table 1 shows the resulting types.

A comparison of theoretically possible types with those actually in existence reveals that types B, D and G are nonexistent. That is to say, there are no large-scale local funds for blueberry cultivation, either among those with no farming background or those who farm other crops. In particular, the lack of involvement of major producers of citrus fruits (which have been grown in the region since 1930) is attributed to the relatively low profit margins for the blueberry. Citrus producers weigh the decision to invest in blueberry production against the alternative of continuing to invest in citrus fruits to make their production chain more efficient (Craviotti and Cattaneo, 2006b). Nor do non-local funds exist for blueberry production on less

¹⁵ Representatives of three of the estimated seven trusts operating in the area were interviewed.

TABLE 1

Entre Ríos (Argentina): types of blueberry producer

Acreage		Diversification of production			
		Single-crop producers		Diversified producers	
		Less than the economically viable unit	Greater than the economically viable unit	Less than the economically viable unit	Greater than the economically viable unit
Source of funds	Local	A	B	C	D
	Non-local	E	F	G	H

Source: Author, based on interviews conducted in 2006.

than the economically viable unit where producers are diversified: as they are small investors, they do not wish to divert some of their limited capital towards activities that they deem less profitable.

Types A, C, E, F and H do actually exist. The results of the analysis are as follows.

There are two subgroups within Type A (locally-owned enterprises growing a single crop on less than the economically viable unit): Subgroup A1, whose members are engaged in non-farming activities but choose to embark on small blueberry undertakings, and Subgroup A2, where the members grow only blueberries but are involved in another sort of diversification by producing nursery plants, another source of income. As these agents are linked with the activity in various ways, they have a greater level of involvement. Owing to their diversification, to some extent they resemble Type C, which comprises local enterprises whose output is diversified.

Type C consists of local producers who have planted small plots of land with blueberries. In their other crops (usually citrus fruits) they farm less than the economically viable unit. It is possible that diversification enables them to make the farm profitable as a whole, by recouping certain fixed costs and using part of the labour force engaged in other activities.

Though not of local origin, Type E resembles Subgroup A1, which also is not diversified and farms less than the economically viable unit. Type E members tend to be non-farming professionals investing in agriculture.

Types F and H are the most significant in terms of both numbers and the acreage they plant, which, potentially at least, gives them the ability to control the conditions under which production develops in the region. They include large non-local enterprises with

a more complex management structure than the other types. They tend to have an office outside the area (usually in Buenos Aires) that takes care of commercial aspects and paying suppliers, whilst staff administration is outsourced to an accounting firm in Concordia. In the field they have a general manager, to whom a field supervisor reports, with different managers for irrigation, agrochemicals and machinery. In some cases the farm is divided into plots, each with its own manager. Half of these enterprises subcontract part or all of their harvesting to farm labour contractors.

Types F and H differ from one another in terms of their productive diversification and vertical integration. Type H includes large enterprises with a more conventional structure, including internationally-owned companies. They farm citrus fruits and, while some have replanted a portion of the land with a view to export, so far this has failed to achieve the expected results. A greater proportion are also involved in packaging, refrigerating and marketing blueberries and have direct access to distributors located in export destination countries.

By contrast, Type F is entirely composed of domestically-owned companies that tend not to employ this vertical integration strategy. Type F also includes trusts.

Based on the above analysis, the hypothetical types previously identified can be redefined and simplified as follows:

1. Small single-crop investors.
2. Large single-crop investors.
3. Small diversified investors.
4. Large diversified and integrated investors.

There is a distinction between Types 1 and 2 on the one hand, and Types 3 and 4 on the other, apart from diversification, refers to the extent to which they apply a

short-term production strategy. The focus on capturing opportunistic profits from blueberry cultivation is aptly illustrated by the following comments made during interviews.

"I am very much tied to the farming sector. I grew up in the countryside and went to school on horseback. I'm a country person but have had to do other jobs to earn a living. I don't know if I shall leave the blueberry business because, if the bubble bursts, it's curtains" (comments by a producer and trust manager interviewed in 2006, case no. 18).

"This is an income-led business, because the price isn't going to stay at current levels, so you need to claw back your money as fast as possible" (comments by the partner responsible for the commercial and administrative management of a corporation, interviewed in 2006, case no. 4).

"Is the outlay for a [frost protection] system that we are hardly going to use financially justifiable? We can wait, a lot of things can happen along the way, like a shift in the Earth's axis or even a guy turning up to offer us a million dollars for

the field as it stands; anyway it's a done deal" (comments by the manager of a corporation and a trust, interviewed in 2006, case no. 15).

Types 3 and 4 have the best prospects for long-term survival because, as they are more diversified and/or integrated, they will be better placed to reduce costs and to break into various markets. However, as Type 3 agents are smaller, they will need to create linkages and horizontal forms of coordination in order to be able to negotiate better conditions with other agents in the production chain. Their size is not necessarily a drawback, as evidenced by the problems larger farms experience in securing and managing harvest workers.

The capital-raising strategies used in the cases under consideration are interesting. Situations range from small investors using their own or their family's capital, to creating companies to incorporate a wider circle of acquaintances, and lastly to setting up trusts whose participants are usually unconnected. This range of situations indicates that non-sectoral capital and agents are gaining access to the farming sector in increasingly complex ways.

IV

Blueberry crop expansion in Entre Ríos and the recent development of the farming sector

The aim of this section is to link the foregoing analysis with the more general processes mentioned at the beginning of this article, that is to say, to detect any clues that the profiles of blueberry producers can give us regarding the changes currently taking place in Argentina's agricultural structure.

On the one hand, this analysis reaffirms the growing significance of capital in relation to investments in land. In the case of annual field crops such as the soybean, the use of no-till technology (using owned or hired machinery), together with genetically modified varieties and the herbicide glyphosate, has contributed to crop expansion (particularly in non-Pampas areas) to an equal or greater extent than investment in land, which is largely leased. In the case of the blueberry, nursery plants, irrigation and packaging infrastructure, and inputs throughout the production cycle outweigh the amount of capital tied up in land.

As the blueberry is a perennial crop and, given the importance of fixed improvements such as irrigation technology, there is no separation between the people in charge of the production process and the owners of the land. However, such a separation does exist in some of the areas planted with annual field crops. In Entre Ríos blueberry production (unlike other blueberry-growing regions), farms are diverse but medium to large establishments predominate. Although these farms seem small in comparison with the acreages typically given over to field crops, a large amount of capital is invested per hectare, as it includes capital tied up in land.

Another issue highlighted by the analysis is the importance of information and management technologies; among other things, this has resulted in rising numbers of technicians on farms. The role of these technicians, which goes well beyond strictly technical

production functions, includes such tasks as formulating investment projects, seeking business partners and exploring opportunities and strategic partnerships. This reflects the growing importance of large-scale investment in both types of crop production.

As has already been discussed, in blueberry cultivation the leading players are not normally producers. Instead the sector is dominated by companies or intangible entities such as trusts. The use of trusts, which first began with annual crops, is notable and stems from strategies to attract non-agricultural investors. As such trusts are private contracts, unlike in the case of field crops, contracts are not awarded on the basis of a public tender and nor are they quoted on the stock exchange. This shows how difficult it would be to gauge the impact of capital from outside the agricultural sector if this type of capital-raising entity were to proliferate; which is very likely to occur, given that the growing scale of production increases capital requirements. Current economic policy also promotes trusts.

Some of the production systems described, coupled with the fact that farm owners are not local, promote the use of managers, who have come to play a key role in enabling new agents to exploit certain local synergies.

Some of the characteristics identified for field crops (greater use of capital per production unit, the presence of non-sectoral agents and the importance of management technologies) might be considered as over-represented in the case of a crop such as the

blueberry. This is because innovative crops entail heavy requirements. In particular, access to information and the assessment of its relevance can be almost as great a barrier to entry into and continuance in the blueberry sector as access to capital.¹⁶ In any case, the presence of small entrepreneurs in blueberry cultivation belies the view that entry into the sector is a homogeneous process dominated entirely by large-scale capital.

The development of the blueberry in Entre Ríos can be likened to the more recent development of field crops, at least in non-Pampas areas, in terms of the limited integration of local agents into these processes, although there are not enough empirical studies to warrant conclusive affirmations. Only a few producers in north-eastern Entre Ríos (chiefly citrus growers) have decided to include the blueberry in their production strategies. More intensive use is made of local labour in blueberry production than for totally mechanized annual field crops, especially during the harvest. However, this short-term work (lasting no more than three months) does not substantially alter the conditions of recruitment of salaried workers. Blueberry cultivation also calls for skilled local labour, in the form of farm managers, many of whom come from the citrus production sector or are children of producers, as well as local input suppliers and service providers for the “new” activity. It remains to be seen whether this will produce more of a spillover effect. In the medium term, the short-termist strategy of some of the agents identified in the analysis could conspire against a wider local impact.

V

Conclusions

The earlier sections of this article linked aspects of blueberry expansion in Entre Ríos with the development of Argentina’s leading crops. One issue to be addressed in these final considerations is the earnings of non-sectoral agents in relation to their policy implications.

In the Pampas region, the difficulties experienced by small and medium-sized producers led some to abandon direct production; this was exploited by other agents in a better position. Similarly, the crisis in the late 1990s in the leading Entre Ríos crop (citrus fruits) led to a drop in land prices. This was capitalized on by agents from

outside the sector, who were attracted into farming by what they saw as an opportunity, blueberry production.

The current environment, which is generally favourable for export goods, could well continue to

¹⁶ The two factors are undoubtedly linked. For example, while large enterprises make no critical investments in cultivation (for instance in blueberry varieties) without taking technical advice, small investors tend to be constrained when weighing up the information provided by input and machinery suppliers, which affects their investment decisions.

bring about such situations, where return on investment plays an important, but perhaps not exclusive role.

The problem with this scenario is basically the preponderance of large-scale establishments, as opposed to an agricultural structure where land is more fairly distributed and so inspires greater commitment to farming and to the local area. However, this does not appear to be happening with most crops in Argentina where the trend is towards larger operational scales.

In the case of the blueberry, as described above, some small investors are joining forces in a variety of formal and informal ways to scale up to the estimated viable economic unit. However, the rationale under which such small investors operate in the region may well not differ from that of large establishments, especially if they delegate management to others.

Progress is therefore required in formulating policies not just to promote the sustainability of existing small and medium agricultural producers by means such as helping them to diversify their crops and encouraging the entry into farming of people who, whilst not ignoring financial considerations, are more

strongly motivated by issues relating to the lifestyle and the development of the local area. In other words, if we assume that in the future there will continue to be situations prompting people to enter farming, then it will be necessary to foster public/private systems of regulation to counter adverse effects on the community and environment where those agents operate (Craviotti, 2006). Initiatives for linking them up with local actors are particularly promising in this respect.

Other countries already have experience of policies to attract residents to rural areas and to encourage the setting up of new producers. Such policies stem from a vision of farming as a sustainable activity whose social and occupational base can, and must, be broadened.

More specific policies must also be envisaged to promote the sustainability of innovative crops like the blueberry, where a transition towards a less favourable market situation is expected. In this case, measures to further horizontal coordination among agents are especially important so as to avoid undermining the incipient effects on local employment and production chains.

(Original: Spanish)

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