

ADMINISTRAÇÃO E ECONOMIA

INVESTMENT AND PRODUCTION MANAGEMENT ARRANGEMENTS WITHIN THE FLORIDA CITRUS INDUSTRY*

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SUMMARY

São Paulo (Brazil) and Florida (USA) produce more than 50% of all citrus fruits consumed/industrialized worldwide, with an annual economic value greater than USD 1 billion (each). In both regions the relative importance of the citrus industry as compared to other activities is similar in many aspects. However, the business structure, the funding of investments and arrangements available for production differ considerably in each region. In Florida, more than 50% of the owners of citrus farms are out-of-state investors, with an urban background and without specific knowledge about production; in São Paulo the ownership structure is quite different. This paper presents a characterization of the busi-

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ness structure and arrangements used in Florida citrus production, as well as perspectives for some of these arrangements within the Brazilian (São Paulo) context. The research relies on an original survey developed in Florida based on interviews with farmers, extensionists, researchers, and managers of companies related to the citrus production.

Index terms: organizations, production models, investments, citrus.

RESUMO

MODELOS DE INVESTIMENTO E ADMINISTRAÇÃO DA PRODUÇÃO EXISTENTES NA CITRICULTURA DA FLÓRIDA

São Paulo (Brasil) e Flórida (EUA) produzem mais de 50% de todas as frutas cítricas consumidas/industrializadas em todo o mundo, com um valor econômico anual superior a um bilhão de dólares (cada um). Em ambas as regiões, a importância relativa da indústria cítrica em comparação com outras atividades é similar em muitos aspectos. Entretanto, a estrutura do negócio, os fundos de investimentos e as organizações existentes para a produção diferem consideravelmente em cada região. Na Flórida, mais de 50% dos proprietários de fazendas de citros são investidores de fora do Estado, com referência/conhecimento urbano e sem conhecimentos específicos sobre produção agrícola; em São Paulo, a estrutura de propriedade é bem diferente. Este estudo apresenta a caracterização da estrutura de negócios e organizações utilizados na produção cítrica da Flórida, bem como as perspectivas para esses modelos dentro do contexto brasileiro (São Paulo). Esta pesquisa se baseia num levantamento primário de dados desenvolvido por meio de entrevistas com fazendeiros, extensionistas, pesquisadores e gerentes de empresas relacionadas com a citricultura.

Termos de indexação: organizações, modelos de produção, investimentos, citros.

1. INTRODUCTION

Florida (USA) and São Paulo (Brazil) produced more than 50% of the oranges consumed/industrialized worldwide in 2000 (FAO, 2000). In Florida, the citrus industry is the second largest industry, behind tourism; in São Paulo, the citrus industry is the second largest exporter, with the airplane industry (EMBRAER) being the largest exporter. In São Paulo and Florida, the citrus production represents an annual economic value greater than USD 1 billion. There are approximately 17,000* growers in São Paulo (FUNDECITRUS, 2001) and 12,000 in Florida (SPREEN & MURARO, 1999). These numbers show strong similarities between these two regions with respect to the dimension and economic importance of the citrus industry. However, the business structure, with respect to the funding of investments and management of production is quite different in São Paulo and Florida, as this research shows through the next sections.

Florida citrus industry has a wider and more complex range of business arrangements and alternatives when compared to São Paulo citrus industry. These arrangements facilitate, considerably, a stronger separation of the ownership of the resources used in citrus production from the knowledge (economic and technical) needed to manage the business. Out-of-state investors, without specific knowledge of citrus production, can invest capital in the citrus production, and have most of the managerial tasks performed by specialized organizations and agents. Indeed, this research indicates that more than 50% of the farm owners are investors that, in general, do not have agriculture as their main business.

In contrast, in São Paulo most of the farm owners within the citrus industry perform most of the managerial tasks needed in their business. Organizations specialized in outsourcing technical and managerial services are rare in São Paulo, making the separation of ownership and management of the citrus production business very difficult. Many of the large citrus farms in São Paulo are owned by families with a long tradition in the

* Some studies say that this number could reach 18,000 growers if all the citrus farmers are counted.

business. In a comparative way, the research indicates that most of the farm owners are farmers that have agriculture as their main business.

The main objective of this paper is the characterization of the business structure that is prevalent in the Florida citrus industry and present comments about the potential application of some of the models used in this structure to the Brazilian citrus industry. This paper is divided in 5 sections: Introduction, Methodology, Results, Conclusion and References.

This study is part of an ESALQ/USP undergraduate internship program developed during the second semester of 2001. This program included a 45 day visit to the Citrus Research and Education Center at Lake Alfred, Florida, under the supervision of Professors Ronald P. Muraro, Thomas H. Spreen and Waldir Fernandes Jr.

2. METHODOLOGY

This study began with a comprehensive search of libraries and databases with technical/academic material about arrangements for investment and production management within the Florida citrus industry.

Most of the findings, however, are based on an original survey that was conducted via interviews with people from 20 organizations related to the Florida citrus industry. The sample used in the survey is intentional and selected with help from CREC (Citrus Research Education Center) experts. This sample includes people associated with different organizations within the Florida citrus industry, from private, public, large, small, national and international companies (Table 2). The questions used in the survey are presented in Table 1. The interviews were conducted from October 6th until November 15th, 2001 and included all of the major production regions in Florida (Indian River, Northern, Central, Western and Southern).

Table 1. Questions used in the survey form

Questions
- How would you describe your citrus operation? (i.e., owner operated, caretaker or absentee managed, size of citrus farms)
- Could you describe all the systems or methods of managing Florida Citrus? (e.g., caretakers, shares ownership of citrus grove and crop production, absentee ownership, etc.)
- How does a company that manages or care takes citrus groves manage its business? Is there share ownership by investors? (e.g., how is billing managed?) How risks are managed (grove caretaking and/or marketing contracts with grove owners/investors? How do you determine and what is included in your charges to grove owners/investors?
- Do you have any policies inside your business manage/offset risk? (e.g., Low interest financing? Insurance (crop, tree, other)? Low price/returns years? Use Futures Markets (hedging) lock in fruit price? Are there any special tax assessments or government assistance for citrus groves?)
- Do you know any business firms where shares are sold to investors and the funds received from the sale of the shares are used to develop citrus groves and all profits (losses) are then distributed according to the amount of shares owned by investors? (Are there any government agencies that regulate this type of business arrangement? – e.g. Securities and Exchange Commission)

3. RESULTS

The search performed in libraries and database presented few references characterizing arrangements for investment and production management within the Florida citrus industry. FASULO (1998) gives a brief history of the citrus industry in Florida, presenting names and addresses of organizations. SPREEN & MURARO (1999) elaborate a comprehensive overview of the Florida citrus industry, with information

on the structure of the business as well as historical data. WISE (1993), in the book “The Farmland Investment Strategy”, characterizes investment alternatives in agriculture in general, without a specific focus on the citrus industry.

Table 2. Interviews performed by business structure category

Business Structure	Number of Visits
Owners	2
Absentee	2
Cooperatives	2
Management & Investment Co.	6
Caretakers	2
Companies	5
Associations	1
Total	20

It is also relevant to describe that some questions (i.e.: how risks are manage?) used in the survey were not used in this paper, because the answers were not clearly enough to make any conclusions.

To better understand the perspectives for investment in the citrus industry, MURARO & AMARO (1994), studied the returns in Florida and São Paulo over a 10 year period (1981-91). The returns estimated for each region oscillated substantially over the years with an average of 15.03% in Florida and 14.92% in Brazil.

In the next section, the results are presented and discussed from the survey described previously.

3.1. Types of Businesses in the Citrus Industry

This section identifies the different types of business ownership that are found in Florida citrus industry, which are described in the following paragraphs.

- *Growers;*
- *Growers (contracted required services);*
- *Absentee owners;*
- *Caretakers;*
- *Partnership owners;*
- *Investment and Management Companies; and*
- *Cooperatives.*

3.1.1. Growers

This business category is represented primarily by farm owners who have been in farming for a long time. Most have the necessary knowledge about agriculture needed for managing and marketing. The knowledge is a result of direct work experience, mostly learned from parents, and/or formal education.

Growers often own their equipment and make all the decisions related to the operations in their groves. Integrated pest control, spraying time, harvesting, and other practices, are operations typically controlled by them. They also manage, operate and repair equipments used in the operation.

Capital resources are owned by the grower and/or by private institutions (often banks), when these resources are given as guarantee for the loans. Most of the time, the grower acts as: manager, owner, consultant, seller, and pest controller of their own grove. Decisions are generally taken based on their own experience. Most of them have adequate technical knowledge needed for production but often lack the marketing skills needed to maximize revenues. Groves in this category are larger than 400 ha.

3.1.2. Growers (contract required services)

Very similar to the previous category of growers, but in this case they can outsource services to help in the grove management. Consequently, operational practices are controlled by others within the industry. These growers are usually medium size farmers (between 40 and 400 ha) and they do not have necessary economical size to have all the equipments.

3.1.3. Absentee Owners

This category is comprised of people who own the land but do not have agriculture as their main activity. The usual meaning of absentee owner is: “People that own a grove but reside in other areas, often out-of-state”. These people are investors, doctors, lawyers, professors, etc. They try to diversify their investments or are even motivated just by the pleasure of saying: “I own a farm!”

Absentee owners have the land and the motivation to grow a crop. Many may not have any experience in agricultural business. They do not own any equipment and labor. Therefore, they outsource services to manage their crops.

Most of the time, they contract caretaker companies, management or investment companies and/or join a cooperative. With the latter, they have management support including all field operations and marketing. If they are members of a cooperative, they also have all the benefits that a partner has, like profits that the Cooperative has made, and can earn in market negotiations from fruit selling and input purchasing.

The services are usually paid monthly to the contracted company. They pay for all the operational cost in their groves and also an administrative fee to the management company.

The acreage is usually small (less than 40 ha). Some try to visit their groves often and assume some control, like marketing management and money decisions.

They also take care of their own business risks, capacity that each person has to be exposed to a situation that can have an economic or physical impact, but in most cases the risk is lower than the other types of investors. It is true that they own the land and there is a risk inherent to that, but they do not have any equipment and staff. Since they know very little about agriculture, their technical risk is higher when compared to people who have enough knowledge about agriculture.

Money problems are partly solved because absentee owners have other sources of capital to support or invest in agriculture, so they can reallocate their own capital, making money management more easily.

3.1.4. Caretakers

A caretaking company offers services to growers related to farm management and production operation necessary to produce the crop. Most are family or private companies. They offer what they call “100% Full Service”. Services include spraying, fertilizing, farm managing, harvesting, marketing, integrated pest controlling, etc. They also provide their clients with consulting and current prices in order to help their clients in fruit marketing.

Caretakers own almost all the equipment, but in some operations they may contract other providers for specific machinery.

Operational costs incurred in the groves plus administrative fees are charged monthly. These costs are usually outlined in Muraro’s cost, published every year in Comparative Budget Costs (MURARO, 2001). The administrative fee is usually between 10 and 15% of the operational costs.

Caretakers cannot decide about everything in the grove, so they have to contact their clients frequently to make a successful management plan. They elaborate budget cost annually and also develop a management plan, telling their clients how much money they are estimating the next year’s crop will generate and also how much money their clients will spend.

Caretakers run their own risk, based on the amount of equipment they have. But in most cases, they have less risk when compared to owners who have their own land and machinery. Usually, they also buy all the inputs for their clients obtaining better prices due to bulk purchasing.

Most do not manage farms far away from their headquarters, but some do. They must provide transport equipment and all the logistic management necessary for the best use of the machinery time wise.

3.1.5. Investment & Management Companies

This category is mostly comprised of private companies that offer agricultural business support to investors all over the world. Most of these companies work together with investment funds or insurance companies.

They offer investors agricultural lands; they attract the investors by showing the returns, correlation and standard deviation that farmland has in the business market.

To be part of this business, one should, first of all, want to invest money in agribusiness. These companies provide assistance to the investor. They have databases with useful information for possible investors in the world, as groves to buy and to sell. These companies provide their clients with help regarding complete management, from establishing a new crop to marketing the production.

To coordinate all these activities, these firms contract various caretakers and management companies to take care of various parts of the business. They are a company that is supposed to provide all the information and help to manage the client's farm.

Their direct agricultural related risk is very low when compared to other business types. Firstly because they have an office, not a grove and equipment. Secondly because all the investment decisions are made by the investors. Consequently, these firms do not take any risk regarding their clients' decisions and risk.

Services are usually charged on a monthly basis. They use the same criterion of the caretakers except that they charge a fix amount per acre. The value varies, usually being USD 210 per hectare a year.

Some of these companies are not related to just one type of crop. They can be present in all agricultural crops and be located all over the country.

They also provide their clients with input purchasing and crop marketing services, helping somehow in the process of bargaining.

Most of their clients are investors or people who want to have another source of income and diversify their portfolio. They are attracted to possible good returns, tax advantages and correlation and also with the possibility to become farmers.

3.1.6. Management Companies

This category works in a way very similar to the Investment and Management companies. Some of these companies are formed by a single individual who provides all the necessary managerial services. The

quantity of equipment varies by companies with some companies owning some of their equipment whereas others owning all the necessary equipment to manage their clients' groves. But in this way they start looking like caretakers. They work like consultants providing all the information to help their clients to make the decision. They usually charge a fix management fee, sometimes lower than the other categories, ranging from USD 3.70 to 8.65 per hectare per month.

3.1.7. Partnerships

Companies of this category offer partnership in agribusiness projects. They sell various projects to investors in limited partnership, offering a percentage in the business. They contract a caretaker or a management company, may create a new company to manage the groves. In this case, this company has its own equipment and does all the work.

Projects costs include all the costs and also a reserve fund to manage the business during a specific period of time. This helps in the amount of money in cash for the project and also prevents the partner from going to the investor to ask for more money every time.

Their business risk is often high, since they own the land and equipments, but in some cases they may split all the sectors of the company in different companies. Another way of minimizing risks is by using all aspects in the law, but this can only happen to companies with knowledgeable people or good quality contracted professional services.

Partnerships usually distribute the profits at the end of the season. They have different companies with different projects, so the profits are distributed considering the companies and also the percentage that the investor has.

Investors are not charged monthly, since the amount to be used in the project has already been charged. Most of the partnerships are 25 years long, with a possible agreement for extension.

3.1.8. Cooperatives

This category is comprised of citrus growers associations that work in the same way as cooperatives. They are formed by growers, who periodically elect/hire the administration staff to manage the business.

Most of their managers are professionals with degrees in Economics and Business Administration. Some growers that are chosen by the membership take part in the board of directors, normally in a number of twelve seats.

A cooperative is formed mainly from small growers that have no power in the market when they are on their own. A cooperative manages everything in the grove, such as spraying, fertilizing, harvesting, fruits marketing and other activities.

Most cooperatives choose to have control over the quality of their fruits, since all the fruits come from different places and different owners. Some succeed in their management plan. They also try to have control over some operations, as pest controlling and harvesting, which facilitates the separation of fruits in the packinghouse. Most cooperatives have a packinghouse.

They sell fresh fruits directly to retailer operations, but they may also have a partnership in a processing plant to produce juice, which is the case of Citrus World, a cooperative of cooperatives and other fruit market associations.

One of the benefits of being part of a cooperative would be that every member shares everything, thus in good years, they share the profits and, in the bad years, the losses. In good years, a cooperative also makes some reserve to finance the bad years. For example, if in one year the grower received USD 250 per hectare and his cost was USD 500 per hectare, the cooperative may decide finance that USD 250 – so the difference in that year the grower zero profits, but in the next season the grower will start with a USD 250 per hectare cost even though he has not done anything yet in the crop. Some cooperatives work in a different fashion, without financing or risk sharing activities.

Managing a large amount of groves and fruits, the cooperative can have bargaining power to negotiate with buyers and also with the inputs industry.

3.2. Discussion of Results

Figure 1 characterizes the relationship between the business arrangements described in the previous sections, elaborated from the interviews with representatives of the Florida citrus industry, considering types of business, ownership and management. In the figure, **owners** own the land and manage their own grove or contract a **caretaker** and/or a **management company**. An owner can be part of a **cooperative** which will manage his grove; he can also be part of a **partnership** that can own the land and manage his groves or contract other companies to do this task.

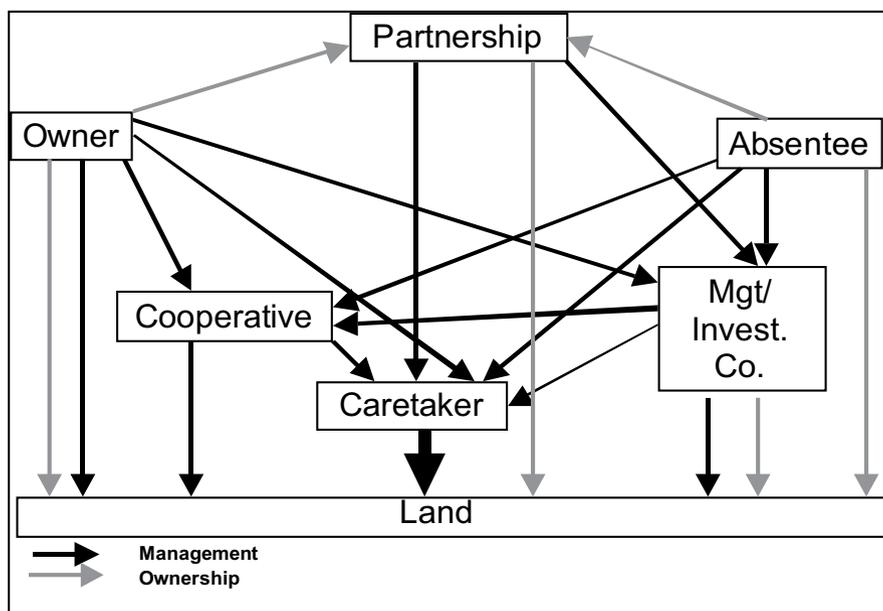


Figure 1. Types of business within the Florida Citrus Industry

In many cases, a **caretaker** owns some grove acreage and manages other farms to better utilize the equipment and increase his revenue by providing the services offered by him. Most of the time, he does not own any land, but he can manage groves for various individuals who own

groves. **Owners, companies, cooperatives** and **absentee** grove owners are providers of management services. **Absentee** owners have the land but they do not manage their land, they contract others to do this work. They can contract each required service or be part of a **cooperative** or a **partnership**.

It can be seen how complex is to describe these kinds of business, since they mix together most of the time.

Equipment ownership is also a point to qualify different types of business. Likewise, who has a management (technical and marketing) type of business also helps classify the categories.

Having capital resources, i.e. money, is considered one of the most important things in a business. Some types of business are qualified as an owner of its own capital resources (Table 3), it means that this kind of business is managed with money from its owner, or financed by him. Capital resources come from someone else, like investors, companies, and also partners. Therefore, most of these owners do not have agriculture as their main business. The table is divided in columns that separate the types of business by category.

Table 3. Florida citrus production: ownership and management overview

	Ownership of Land	Management Technical/ Marketing	Ownership of Equipment	Ownership of Equities
Growers	X	X	X	X
Absentees	X			X
Caretakers		X	X	
Invest & Mgt Co.*		X	X	
Cooperative		X	X	
Partnerships	X	X	X	X

* Investment and Management Corporations

3.3.Perspectives for Florida arrangements in the Brazilian Citrus industry

Investments from urban investors in the farm business are not a common practice in Brazil. This happens possibly because the services and organizations needed to allow a better separation of ownership and management are rare in Brazil.

Most of the models described in the last sections (Owners, Absentees, Caretakers, Investment and Management Corporations, Cooperatives and Partnerships) do exist in Brazil, but are not common in the citrus industry. Next paragraphs present some possible reasons to explain this fact.

The first point is that Florida differs from Brazil in one of the most important operations needed to manage the groves, which is the spraying of pesticides to control pests and diseases. Florida has a better well known and distributed schedule of spraying (excluding the *Coletotricum* and Canker problems) when compared to São Paulo, which facilitates the arrangements for spraying outsourcing. The second point is that the composition of citrus varieties found in Florida and São Paulo is very different. In São Paulo, Pera variety (44.1% of tree inventory according to Fundecitrus) has some problems with the harvesting schedule, since it blooms more than once a year. It is very common two or three harvests (in times of the year which cannot be totally anticipated in the beginning of the season) per season in groves with this variety, making the harvesting and marketing schedule more difficult and costly even considering the bigger revenue with this fruit. As it happens to spraying, this feature of the São Paulo citrus industry is a big obstacle to well planned arrangements (in the beginning of the season) aimed to outsource harvest.

Another point is that, in recent years, Brazil implemented monetary policies to stabilize the economy, considering high interest rates on government bonds and similar investments. These policies tended to decrease the interest of investors for other investments in general and in the citrus industry in particular. The United States of America (USA), in contrast, have interest rates in government bonds on levels that often motivate investments in other (riskier) activities. Therefore, that is one

reason that motivates more private investment in agriculture, including citrus, in the USA.

Finally, recent initiatives in Brazil aimed to bring capital from urban investors to farm enterprises in a large scale did not succeed in Brazil. *Reunidas Boi Gordo Co.* and *Gallus Co.* are examples of disastrous experiences that led to significant losses to urban investors because of legal problems, bad management and fraud. These experiences have certainly contributed to make investors more skeptical about new experiences of this kind for the Brazilian agriculture. Some companies had similar problems in the United States but the credibility in agribusiness investments was not lost.

There is a few growers' pool in São Paulo, but just for marketing the fruits. It's not a very common way to be organized in the Brazilian Citrus Industry, even considering the big size of this corporation when compared with the Florida ones.

It is relevant to add that even considering all the differences and disadvantages in management and production organizations and the market protection tariff in FCOJ (Frozen Concentrated Orange Juice) - USD 418.50 per ton – that differ the United States and Brazil, this nation stills the top exporter and producer of FCOJ in the world.

It is also important to say that capital markets and financial organizations are starting to be well structured in Brazil, to in the near future, being able to support and manage businesses similar to the ones found in the USA. Instead of that, Brazil should start preparing its structure to receive some of these new kinds of business, because the high interest rates and lack of trust will not stay long. But the investors and growers in Brazil can not forget that the citrus industries in both places have some important technical points, like pests and disease spraying, that can be changed, but it is very well controlled and managed. Table 4 shows almost all the mainly differences and similarities discussed in the paper.

The discussion presented in this study might motivate some interest in the development of these models in the Brazilian citrus industry.

Table 4. Florida x São Paulo: main differences and similarities

	São Paulo	Florida
Value	> USD 1 billion	> USD 1 billion
Number of Growers	17,000	12,000
Business Arrangements	Growers, Corporations, Cooperatives, Partnerships	Growers, Absentee, Partnerships, Investment and Management Corporations, Caretakers, Cooperatives
Annual Interest Rate on other activities (risk free / government discount rate)	High (>15%)	Low (<2%)
Spraying schedules for Pest control ...	Spraying schedules are not well defined	Spraying schedules well defined
Varieties used	Pêra, Valencia, Natal, Hamlin	Hamlin, Valencia, Navel, Grapefruit
Financial Structure	Well structured	Well structured
Market Protection in FCOJ*	Do not exist	Very High (USD 418.50/ton)

*FCOJ – Frozen Concentrated Orange Juice.

4. CONCLUSION

The models for investment and production management in the Florida citrus industry offer a broad range of alternatives for management and ownership, and also facilitate investments from capital markets in the citrus industry. Perspectives for some of these models being used in Brazil are positive. There are, however, some environmental/economic constraints in the Brazilian citrus industry (associated with pest/disease control, harvest, high interest rates and trust) which may present obstacles for the development of some arrangements able to allow a better separation between management and ownership in the industry, a positive condition to facilitate the flow of investments from urban investors.

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