

**PROPOSITION OF A METHOD FOR INDUSTRY ASSOCIATION'S
REMUNERATION**

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1. INTRODUCTION

The Brazilian citriculture has an exemplary past. From the beginning it has been responsible for the generation of more than US\$ 50 billion in exchange value for Brazil and it has always characterized worldwide leadership, as much in the market share as in innovations, logistics and positioning. The maintenance of the Brazilian citriculture is of the utmost economic importance. Brazil produces 28% of all oranges produced worldwide and makes up for 82% of orange juice commercialized internationally. This puts into motion around US\$ 2 billion per year. Citriculture is one of the main activities in 348 cities in the State of São Paulo. It generates about 400,000 direct jobs and more than 3,000 simultaneous work programs in the harvest phase.

In recent years, one of the biggest challenges imposed to the Brazilian citriculture is the increase in number of plagues and illnesses that attack the orchards. Such problems, besides making production onerous and dependent on high technology control, reduce productivity and finally, cause irreversible damages through eradication of plants.

The periodic inspection of orchards is of basic importance, allowing the detection of the presence of the plagues and illnesses at the beginning of the infestation. In Brazil, the necessary measures and actions of the sanitary defense of plants is a responsibility of the São Paulo State Government. However, the limitation of financial and structural resources of the Brazilian government jeopardizes the good development of this function. Because of this limitation of resources, the orange juice industries and the producers joined in 1977 to create Fundecitrus, to fund the support to Citriculture. In the nineties, the organization started to develop research, in partnership with Brazilian and international institutions and universities. In three decades of existence, Fundecitrus has become one of the most respected organizations in the world for vocation and innovation in the track of plagues and illnesses, as well as the generation and diffusion of new technologies. Its importance in the international scenario has been proven by the diverse foreign missions that visit the organization to learn details of its works.

This non-governmental organization is structured in 3 areas. It is a technical area that's responsible for the inspection of works and training of producers, with approximately 2,000 assistants and more than 100 coordinators distributed in 54 regional offices. It is a scientific area that carries out and finances scientific research with about 15 researchers and a communication area, which is a direct channel with producers; it issues an informative magazine every two months and keeps the institution's web site.

The maintenance of this structure demanded in 2007 a budget of US\$ 19,50 million (R\$/US\$ = 2,25). This resource came from producers' contributions and the orange juice industry. The contribution had as a base the collection of US\$ 0.04 for each orange crate (40.8 kg) that was delivered from the producer to the orange juice industries. So, for each box of orange that was delivered for processing, it was collected US\$ 0.07 that was aimed at Fundecitrus.

Meanwhile, this model of collection of contributions has been modified by the new organization's statute. The new model will have as bedding the calculated collection on the basis of the number of plants of citrus per property of each associate. This alteration brings the inclusion of citriculturists that alter their production for the fresh consumption market. Historically this production represents 30% of the total orange crates harvested in the state of São Paulo, trumping the production of lemon and tangerine, that totals approximately 27 million boxes (40,8 kg/each), and a park of 9.5 million plants.

In what is referred to as the prescription collection, besides the alteration of the contribution base, the new Statute also foresees other forms of collection. For example, by the industry's donations, which act in the sector of either, juice, machines, inputs or others. On one hand the new Statute brings greater range in the collection involving citrus producers whose production is destined for the fresh market and inserts other links of the production chain. On the other hand, it brings for the management board of FUNDECITRUS and for its titular council members, a series of questionings:

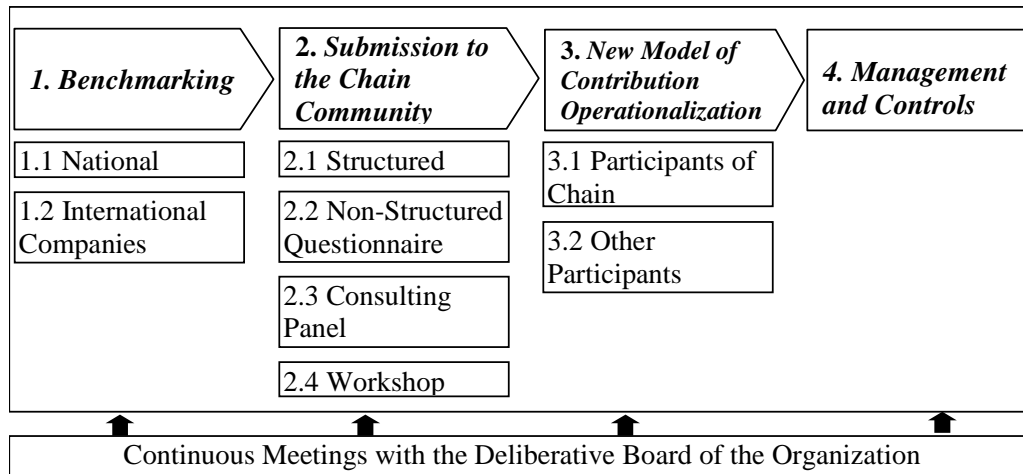
- How to carry through the inventory of the citrus orchards?
- In what operational ways could this collection be implemented?
- Which other models of contribution used in other organizations in the financial sector could serve as examples?
- Is this the right moment to modify the contribution model or is it still too early, based on the information that the organization gets from the associates?
- How will citriculturists receive this change?
- How to get other links of the production chain to contribute to FUNDECITRUS?
- Would citriculturists prefer to purchase agricultural inputs produced or commercialized by companies that also contribute to FUNDECITRUS?
- How to give credibility and get support to the proposal?
- How to motivate other agents to contribute to FUNDECITRUS?
- What image do citriculturists have of FUNDECITRUS, that is, do they believe that this organization is important for the competitiveness of the Agri-industrial System of Orange?
- What will the communication plan for different public audiences be like?

The aim of this article is to discuss how this new model of contribution has been created and understand its main challenges.

In order to achieve the proposed aim and try to answer the raised questions, a work method has been developed based on four pillars: (1) benchmarking with other associations, national and international companies, (2) Involvement to the chain community, through questionnaires, consulting panel and workshops, so as to identify possible ways of collection, (3) to build up a collection model that is more equitable to the participating agents, involved in the chain and finally, (4) Management and control systems of the new method . It is important to emphasize that all these step for the method should be developed with a continuous meeting with the board of the organization.

This method is synthesized in the followed figure.

Figure 1: The Method for Industry Association's Remuneration.



Source: Markestrat, 2007.

2. CITRICULTURE

The orange juice chain is one of Brazil's most competitive food chains. The country is almost a monopolist in world exports of the major traded product, the frozen concentrated orange juice (FCOJ), holding more than 80% of the market share.

Brazil is responsible for 30% of the world orange production and 60% of the orange juice production (USDA, 2009). It is a chain that moves around US\$ 4 billions per year, generating more than 400 thousand direct and indirect jobs (ABECITRUS, 2009). Production costs, experience curve, innovations in research, logistics and technology are pillars of this efficiency and leadership in Brazil.

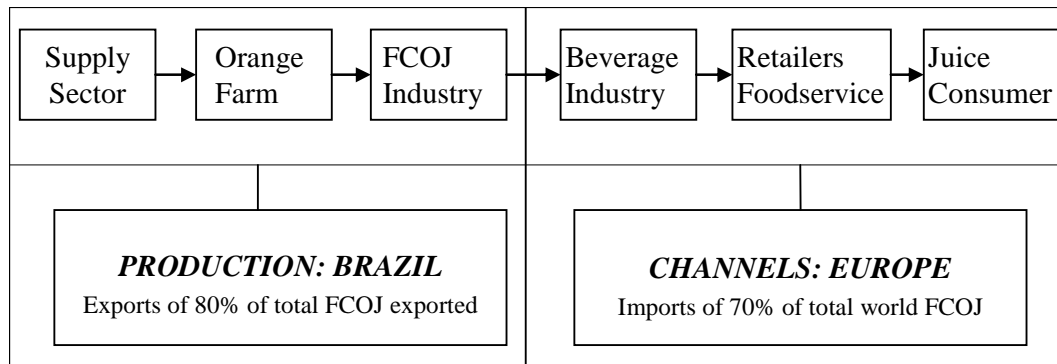
It is a mature industry, with more than 40 years. From its beginning, it has been responsible for the generation of more than US\$ 50 billion in foreign currency for the country with its exports, mainly coming from the State of São Paulo, where some producing cities developed due to investments in the sector, and are currently showing higher development rates when compared to the Brazilian average. In 2007, Brazilian orange juice exports FCOJ (frozen concentrate orange juice) reached almost US\$ 2 billion.

As in all food chains, several changes are happening bringing impacts to orange juice. What are the major impacts of globalization, concentration and changing consumer to this food chain?

To describe the orange chain, the approach will be the traditional "agribusiness systems approach" (Zylbersztajn, 1995; Goldberg, 1968) starting from the end-consumer, who drives this chain, and moves backwards to farmers and input suppliers. The FCOJ is exported from Santos (Brazil) mostly in bulk systems (with dedicated vessels and port facilities). The main ports of arrival are Rotterdam, and Amsterdam (22%), Antwerp and Gent (42%) and Hamburg. After leaving the facilities at the European ports, the juice is mostly sold to bottlers (beverage industry). These agents sell the juice to several

other agents, grouped in retailing and foodservice sectors, before the end consumption. The major focus will be on orange production and industrialization. Figure 1 shows a simplified description of the orange juice chain.

Figure 2: Description of the Simplified Orange Juice Chain.



Source: Markestrat, 2007.

3. FUNDECITRUS

Fundecitrus (Fund for Citriculture Support), is an association run by citriculturists and citrus processing industries, aimed at the well-being and health of the orchards.

It was created in 1977 to help the Agriculture Ministry's National Campaign to eradicate Citrus Canker. The disease was identified in Brazil in 1957, and it struck citriculture in the state of São Paulo in 1979.

Along the years Fundecitrus has grown, modernized and expanded its coverage area in order to preserve the well-being and health of the world's largest citricultural area. Today, besides monitoring citriculture, it helps the Agriculture Department with the eradication of citrus canker. It conducts and finances research to discover ways of controlling or handling diseases and plagues that affect this culture.

From 1997 on, it has oriented nurserists and citriculturists by means of diffusing adequate technology for the production of seedlings, and it has helped authorities to create specific regulations for citrus seedlings production. Apart from this, it researches on diseases that are not present in the routine of citriculture in Brazil, but that may reach the country at any time. An annual amount of US\$ 1,33 million is destined for research. The entity also encourages the exchange of information and promotes research in partnership with both institutions and scientists from other countries such as The USA, South Africa, Spain, France and Argentina.

It counts on 14 Fitosanitary Support Centers and 33 bases in Regional Offices for Agricultural Support, strategically distributed all over the citriculture area, with agronomists and technicians at the producers' disposal. Apart from offering online services, it has a toll-free hotline.

Another channel of contact with producers is a technical magazine that Fundecitrus publishes every two months, which contains updated information on what is happening in the field of citriculture. Fundecitrus also publishes technical manuals dealing with prevention and treatment of diseases. It also has an online library linked to several institutions and universities to encourage the exchange of information among scientists and to have its database at the disposal of those who are interested in it.

4. VERTICAL ASSOCIATION IN THE AGRI-INDUSTRIAL SYSTEM

An organization is defined by Olson (1999) as a group of individuals with common interests. The debate over the role of an organization in a certain society is literally geared towards meeting the needs of its members. One can notice that individuals who take action in a disorganized way are less efficient than those who do so in an organized way by developing group actions. As an attempt to maximize their profits and their functions, individuals join organizations that have common interests.

These groups of individuals can take action through either horizontal organizations or vertical ones. The difference between them lies on the reach of the systemic vision of such organizations. According to Nassar (2001), the action field of a horizontal organization is related to one specific industry only. In the cases when there is the need for provision of goods that go beyond one industry in particular, it is necessary to create vertical organizations.

According to Campos (2007), a vertical organization is defined as a type of organization composed of agents of different links inside an agri-industrial system, who search for cooperation by means of group actions for the benefit of all its members or at least some of them. For Farina et al (1997) this organization has an important role in coordination, since it serves as an stabilizer for the institutional environment by giving support to trading by means of supplying goods and services such as products certification, standardization, group brand-name, supplying information regarding the sector, actions of group communication, etc.

These organizations aim to develop actions that aim to increase competitiveness of the production chain as a whole. The exchange of experience and knowledge among its members that promotes the group's learning is of the utmost importance.

Porter (1998) describes in his work on competitive strategy that **online** structure is regarded as an important differential, once it enables the organization to be more adaptable to pressures and environment mutations, and, that a model of inter-company coordination enables more efficiency and competitiveness through the concentration of competencies and resources, minimizing transaction costs and maximizing organizational learning. This exchange of experiences and cooperation are made easier when there is an adequate organizational structure.

According to Campos (2007), the structure of a vertical organization involves the creation of an Executive Council with representatives of horizontal organizations of all links of the production chain, representatives of the government, of universities and research institutes. By means of monthly meetings, this Council debates and approves

proposals; supervises and approves budgets and accounts of the organization and it cooperates in favor of the industry development.

Below the Executive Council in the organization's structure, there must be an Executive Director with an assistant to perform the following tasks: calling meeting with the executive council; controlling the budget of the organization; managing the development of the activities, being the representative of the organization before the State and the society. This Executive director must be a professional dedicating full time to the management of the vertical organization and must get a compatible salary.

Below the Executive Director there must be Work Committees to discuss issues of the same strategic dimensions, such as Communication Committee, Logistics Committee, Technical Training Committee, among others.

Below the Work Committees are the members of the organizations. In spite of the fact that all agents of the production chain will directly or indirectly get some benefits from some of the organization's actions, some kinds of members will be able to have additional benefits according to the category they belong to. However, the members can be classified in two categories: contributing members (with full access to information, reports, database, publications, booking priority in events held by the organization, benefits from actions taken by the organization, apart from being able to participate in debates at the executive council meetings) and affiliate members (with restricted access to benefits offered by the organization).

As for the loan mechanism, there must be a part from the government and a part from the contributing members that in return have more benefits than members who do not contribute. The lack of resources is the main problem affecting the development of group actions in Brazil. Another hindrance is the lack of commitment in the part of the organization's agent members and the lack of interest of the great majority of non members in becoming members. Such facts stop the development of actions that can bring results of great impact from taking place in Brazil, focusing only on punctual actions of little impact.

5. BENCHMARKING OF VERTICAL ASSOCIATION IN THE VERTICAL AGRI-INDUSTRIAL SYSTEM

One of the chosen procedures to achieve the aim of operationalizing a new model of contribution to Fundecitrus carried out a study of collection of other organizations from several sectors in Brazil and around the world, aiming at the learning of some practices that might be adapted to the reality of this organization. This study is referred to in the literature as benchmarking.

Benchmarking is a structured method of the learning of the improvement of work processes. It makes it possible to identify, to learn and to adapt practices and excellent processes of a certain organization, from anywhere in the world in order to help such an organization to improve its performance (WATSON, 1994).

The method has been applied to fifteen organizations, being seven domestic companies and eight from abroad, all of them from different production chains and services, so as

to study their contribution system one by one. Apart from separating compulsory and non compulsory contributions the study attempted to answer three main questions:

1. What is the base of the collection system used by these organizations? – that is – What is the collection criterion used (e.g. based on plant, area, processed volume, fiscal discount)?
2. How is resource collection carried out (for instance: bill sent via bank, discount on payment for raw materials, by taxes collection)?
3. How is the database of the contributing members dealt with and how are the data updated?

The annexes 1 and 2 present a summary of the results of the benchmarking. These tables are find enclosed. One can notice that from the 15 organizations studied in the benchmarking, 7 have their income from compulsory contribution, as shown in table 1. Among the foreign organizations, IDFA, Dairy Australia e Florida Department of Citrus, all of them received their contribution based on processed volume. Dairy Australia, apart from charges based on processed volume, gets financial AID from the American government to supplement its income.

Another interesting case is IDFA, besides the charges collected from producers and industry based on the volume of processed milk, a charge based on the turnover is also collected from all agents in the chain; all companies that supply ingredients, equipment, packaging pay according to gross turnover of sales to milk industry, which is another way the organization has to collect.

Another interesting factor to be noticed among compulsory organizations is the database renewal system. It is not at all an expensive system to implement. It is based on reports on contributing members. As for the organizations with non compulsory contributions, what drew more attention was the fact that the collection mechanism of most of them was done via bill sent by banks, besides this, another fact that draws attention is that most organizations have a more onerous database renewal system, including constant visits to property, use of GPS and satellite.

The Table 2, on annex 2, shows organizations whose contributions are not compulsory. Among the cases, it is worth highlighting BSCA (Brazil Specialty Coffee Association), besides collecting a charge based on planted area, it also has other methods of collection: collection based on exported volume, nominal collection (different charges for each member category), charge for production certification plus charge for the stamp.

6. FUNDECITRUS AND A NEW MODEL OF CONTRIBUTION

In the present contribution model, FUNDECITRUS income is basically composed of contributions coming from citriculturists and from orange juice industries, besides punctual deposits made by the State and Federal Government, and other resources that FUNDECITRUS obtains in Brazil and from abroad. These resources may even increase due to the role played by FUNDECITRUS of supporting the Brazilian production, creating positive effects on neighboring countries. The new Statute foresees that other links of the production chain may also contribute to FUNDECITRUS. The resources of

FUNDECITRUS will consist of contributions and donations from the following sources, according to the new Statute: (1) Citriculturists; (2) Nurserists; (3) Manufacturers of Inputs used in citriculture; (4) Fruit Processing Companies (packing house); (5) Income regarding services; Government (MAPA and Agriculture Department of São Paulo State); (6) Extraordinary Donations from Brazil and from abroad; (7) Subventions and donations from individuals or private corporations and corporations of other sources.

Figure 5 shows, in a scheme, the origin of contribution in the present model and in the model proposed by the new Statute. On analyzing the figure, it is clear that the new model broadens the contribution base, including growers of fruits for “in natura” consumption, besides including other sectors of citrus production chain.

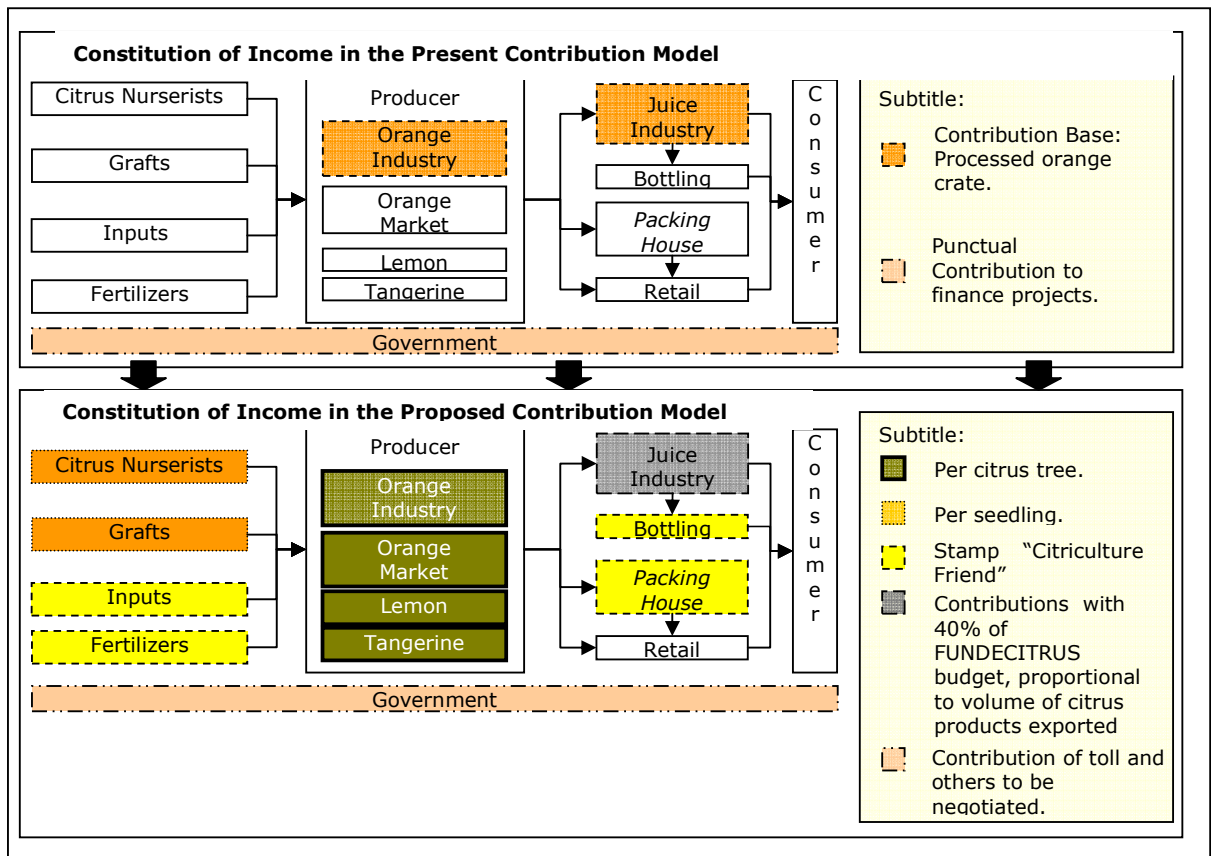


Figure 3: FUNDECITRUS income constitution by links of the production chain. Source: Markestrat, 2007.

The changing of the contribution based on tree and not on crates anymore creates some implications. On one hand this change has positive results, as listed below:

- Higher coverage, since this will put together in an excellent arrangement all the citrus park;
- It is fairer, once FUNDECITRUS inspection cost, that accounts for the largest part of its budget, is based on tree and not on crate. Thus, it is fair to charge for the service using exactly the same cost generating unit.

- It's great encouragement to productivity, which happens in all agri-businesses. The more productive the citriculturist (crate/tree), the lower the amount paid per crate. For example: a citriculturist, who produces on average 3 crates per tree, pays US\$ 0.04 per crate. If we consider US\$ 0.076 per tree, this citriculturist will pay approximately US\$ 0.025 per crate.
- Higher representativeness of the citriculturist at FUNDECITRUS, since the trees belong to the citriculturists and the number of trees will determine their representativeness at FUNDECITRUS.
- Definitely it will be possible to have the inventory of citrus trees - varieties, age - and this will enable strategic decisions and planning.
- Producers know in advance how much they will have to pay, regardless of their production. The cost will be fixed and not variable.

On the other hand, as negative factors, in social terms, and this is a big concern for the associations and trade unions; it must be considered that citriculturists that face a more serious situation in terms of economic sustainability, with older orchards, more advanced stages of diseases and are consequently less productive, will have greater impact on their budget.

A hindrance of expanding collection is its operationalization. Due to this challenge, this report aims to suggest possible ways divided into 8 sub-items: (1) citriculturist, (2) citrus nurseries, (3) inputs manufacturers, (4) Processing Companies or Packing Houses, (5) Orange Juice industry, (6) bottling companies, (7) government, (8) service supply.

Due to the proximity of the new system implementation, alternatives to operationalize it have been considered so that it can be established in a short period of time. The set of alternatives has been named Temporary Solution. Apart from proposing such alternatives, which are relatively simpler, this work has also suggests more elaborate measures that may be implemented after 2 years of the consolidation of the new mechanism, which must take place in the next 2 years.

Next, the suggested proposal will be explained in details, following the order of citriculture dependence and importance in terms of volume of contributions.

6.1 Citriculturist

a) "Temporary Solution" (Next Two Years)

With the Temporary Solution, in the next 2 years, it's suggested that the present contribution model should continue, that is, the collection of US\$ 0.04 from producers per box delivered to orange juice industries, and exactly the same collection from the orange juice industries.

Apart from that, FUNDECITRUS must start a process to conquer citriculturists and industries that do not contribute to the institution yet. This process must be a process to convince them, unless certificates must be required in a shorter period of time. What is taken into consideration is the fact that the larger the number of contributing

citriculturists, the lower the contribution will be in the future per citriculturist. This makes the system fairer and more equitable.

b) Proposal from Third Year (to be structured)

It is suggested that measures be immediately developed to be implemented in the third year, so as to enable FUNDECITRUS to be prepared to implement such measures at the beginning of the third year.

Operational Mechanism

In order to implement the collection based on the number of citrus trees on growers' farms, the growers must be associated with FUNDECITRUS. According to Art 9 of the new Statute, individuals or corporations that currently contribute to FUNDECITRUS will be automatically accepted. New requests will be made by means of forms or by an individual/corporation showing interest. Another condition to the implementation of the new model is updated information about the number of citrus trees owned by the associated citriculturist.

The Agrarian Development Ministry (Ministério do Desenvolvimento Agrário - MDA), through the National Institute of Colonization and Agrarian Reform (Instituto Nacional de Colonização e Reforma Agrária - INCRA), keeps records of all Brazilian rural property in the National System of Rural Records (Sistema Nacional de Cadastro Rural SNCR)¹. Through this system it is possible to know data about the structure and the use of each property in Brazil's territory. The renewal of data takes place every three years or when a property is sold.

Although this system informs the area (ha) of citrus trees planted in the property destined for this culture, it does not inform the number of existing citrus trees. However, the use of this system for the registration of FUNDECITRUS associates calls for agreements with MDA and INCRA in order to add an item to be filled out in the form aimed at collecting data about the use of the rural property. There the grower will inform the number of existing citrus trees in the property.

Another alternative to the registration of FUNDECITRUS associates is the use of the Rural Territorial Tax (Imposto Territorial Rural - ITR). The advantage of using this document is that the information on the rural property is updated annually, while, through the "SNCR", the renewal of data usually takes place every 3 years, as it has been previously said. Similarly to what happens regarding the "SNCR", the form used at present should be adapted, since the information required is limited to the size of the planted area, without considering the number of citrus trees in the property.

However, the most immediate alternative to the associated citriculturist is to inform the number of trees in his property through a Declaration Act. After the consolidation of the new contribution model, one possible alternative is the use of a geo-reference system that enables the automatic counting of orange trees from high definition digital images captured by special satellites. With this system it will be possible to develop new uses

¹ Rural property with total area composed of up to 4 fiscal modules, the legislation does not oblige the grower to declare the use of the property. As a result, the SNCR cannot inform the culture/ planted area of this kind of property.

of the information, which has been very poorly explored by the Brazilian citriculture so far, to inform crop estimate and kinds of trees planted.

Once these two conditions are met (citriculturist associated and inventory regularized), FUNDECITRUS should develop web platform software to keep records of all associates. Once the registrations are carried out, the software, (similarly to what the airlines do regarding their mileage programs) creates individual accounts and, consequently, one piece of information is the negative balance on the citriculturist's account in relation to the number of citrus trees in his property. This software will have a database centralized at FUNDECITRUS and it will enable all the juice industries to have access to the negative balance of their citrus suppliers.

When the industry receives the fruit from the grower to be processed, it will be able to consult the negative balance on the citriculturist's account with FUNDECITRUS through this software. It will discount the contribution and will send the amount to the association. The citriculturist's negative balance (proportional to the number of citrus trees) can be settled at once, in the first fruit delivery to the industry, or gradually, throughout the year whenever there are fruit deliveries. At the end of the year, FUNDECITRUS will sort out all citriculturists with negative balance and will issue a bill to be paid by them through the bank system.

For those associated citriculturists who have all their production destined for "in natura" consumption market, the system will issue a bill for the negative balance. Then, this bill will be sent to the citriculturist. As soon as the bill is settled, the software acknowledges payment, through the exchange of files with the bank system, and settles the associate's negative balance. It is suggested that annual negative balance should be paid in fixed monthly installments so as not to create problems to FUNDECITRUS cash flow.

Contribution Amount

The amount charged as citriculturist contribution in the third year should be kept at the same standards as it is today, changing only tax basis, of orange crate/citrus tree. As citriculturists contribute US\$ 0.04 per orange crate delivered for processing, the amount of contribution per citrus tree must be US\$ 0.076 at the most, considering the historical productivity average of 1.9 crates per tree.

The amount of contribution of an adult tree (productive phase²) must be different from that of a young tree (non-productive phase³), proportional to the cost of a tree itself. It is suggested that an adult tree (development and productive phase) be worth US\$ 12,44 and a young tree approximately US\$ 5,33. Therefore, the contribution amount of a young tree should be 43% of the contribution amount of an adult tree. Considering 43% of US\$ 0.076 (adult tree), the suggested contribution amount of a young tree is US\$ 0.03. It is important to remember that both young trees and productive trees are monitored by FUNDECITRUS and it has a cost.

Because there is no income during the non-productive phase of the orchards, several producers ask to be exempt from contribution during this period. In order to meet their request, another alternative is proposed – to postpone the young tree contribution, by

² It is understood by productive phase a citrus tree over 4 years old.

³ It is understood by non-productive phase a citrus tree under 4 years old or 4 years old, that has not reached commercial performance.

adding the US\$ 0.03/young tree/year to the adult tree contribution. Therefore, the contribution that would take place during the four years of the non-productive phase (US\$ 0.03/young tree x 4 years = US\$ 0.124) would be paid off during the 10 first years of the productive phase. By doing so, the contribution of an adult tree would be US\$ 0.09 (US\$ 0.076 + US\$ 0.012) and there would not be contribution of young trees.

This decision would be up to each associate. Each associate, in such a case, must have the choice to postpone the contribution of young tree (option B) or have different contribution amounts based on adult tree and young tree (option A).

Potential Volume of Contribution

In the third year, considering about 221 million citrus trees existing in the state of São Paulo and the 60% of the citricultural park participating, the contribution coming from citriculturists would reach an estimated amount of US\$ 10,01 million, at US\$ 0.076 per citrus tree. At maximum potential, this contribution could reach as much as US\$ 16,44 million if a 100% rate of participation takes place.

The collection can have its participation rate increased once certificates issued by FUNDECITRUS for commercialization and/ or transit become a requisite.

6.2 Orange Juice Industry and Other Contracts (Toll)

a) Temporary Solution (Next two years)

Under the “Temporary Solution” it is suggested that the present contribution model continue for the first two years, that is, the collection of US\$ 0.04 per crate processed by the industry, as a counterpart to the producer’s contribution (something like 50% of FUNDECITRUS current budget).

b) Proposal for the Third Year (to be structured)

The risk of new plagues and plant diseases is something that concerns mainly the countries that participate actively in international trade. Due to this fact, the countries which are members of the World Trade Organization (WTO), such as Brazil, have the right to establish measures to protect their plant heritage. One of the possible measures is the requirement that an agricultural product or Forest product be produced in compliance with an official system of fitosanitary certification. This certification is testified by an international document named International Fitosanitary Certificate (IFC), issued by officials for the Ministry of Agriculture (MAPA) based in international border offices.

To obtain this certificate, the products that reach MAPA’s international border offices or state border Fiscal Offices must have an Origin Fitosanitary Certificate (OFC). The OFC testifies the real fitosanitary condition of the product still within the farm “gate” and it is issued by either agronomists or Forest engineers in after sales, who are recognized by the government, so that they can certify, on the behalf of the government, the sanitary quality of certain products, as a result of effective monitoring of their production cycle.

The same certification rules applied to agricultural products are requested for inter-state transit of seedlings, grafts and citrus fruits. The document that authorizes the transit of

plants is named Plant Transit Permit (Permissão de Trânsito Vegetal – PTV), issued when OFC is shown to the officials.

FUNDECITRUS has now the opportunity to make a deal with MAPA to issue OFC only to citrus produce grown in/or derived from orchards certified by FUNDECITRUS.

Operational Mechanism

Although the new Statute does not regulate the contribution of the juice industry, the development of this work has shown that such contributions are extremely necessary for the FUNDECITRUS budget to continue, at a first stage, at current standards, without increasing citriculturists' contribution. It is worth highlighting the opinion that the contribution amount must decrease gradually, as long as FUNDECITRUS finds alternatives to its budget.

Due to this fact, the proposal is that 30% to 40% of FUNDECITRUS' current budget be divided proportionally between industries and juice exporters.

Contribution Amount

The contribution amount for each industry will be proportional to the volume of juice exported by each one. The information of the volume exported can be obtained through an agreement between FUNDECITRUS, Foreign Trade Department (SECEX) and the Industry and Commerce Development Ministry (MIDIC).

Potential Collection Volume

Taking into consideration the budget of 2007 – around US\$ 19 million, and considering 40% of this amount, as proposed before, the amount paid would be about US\$ 8 million. In order to estimate the amount of each industry, this sum was shared among the juice exporters using the market share informed by Rabobank (2007)⁴, the contributions would be as follows:

- Cutrale (36% of market share): US\$ 3 million.
- Fischer-Citrosuco (30% of market share): US\$ 2,5 million.
- Citrovita (12% of market share): US\$ 1 million.
- Dreyfus (12% de market share): US\$: 1 million.
- Other (10% de market share): US\$ 355,6 thousand.

It must be highlighted that the amounts show above are just an exercise made with the information of market share supplied by Rabobank. This work proposes that this division be made taking into consideration the information on juice volume supplied by the Foreign Trade Department (SECEX).

6.3 Citrus Nurseries

Operational Mechanism

⁴ GONZALEZ, M. Time to Reflect: opportunities and challenges for Brazilian orange. Rabobank, August 2007.

It is suggested that the nurseries' contributions be realized based on the number of commercialized seedlings in the previous year or by the survey to be realized by FUNDECITRUS at the time of the phytosanitary inspection team during the year. Operationally, it could be implemented through the bank order.

In the second phase, when the contribution model is consolidated, it is suggested that the amount of graft-stock traded be also included in the calculation basis, as the 514 already available ones have as main activity the graft-stock production and marketing. The contribution value should be proportional to the seedling contribution value based on its production cost.

To guarantee the health condition of the Brazilian citrus park, it would be interesting if the seedlings would have a health certificate, issued by FUNDECITRUS. Without this certificate, it would not be allowed to commercialize the seedlings. For the FUNDECITRUS associated nurseries, this certificate would be free (it is already included in the seedling contribution); for non-members, it would be charged. FUNDECITRUS will keep in its site, the list of associated nurseries and will recommend the purchase of these seedlings associated nurseries.

Contribution Value

It is suggested that the seedling contribution value be proportional to the commercial value one (US\$ 2) comparing to the grown stem value (US\$ 13), which represents 16%. Adopting the grown stem contribution value of US\$ 0,076, the seedling contribution value will be US\$ 0,01.

Another alternative to get the contribution from the nurserymen would be to charge for the greenhouse area (m²). It is estimated that there are currently about 1.160 m² of glass-house used for seedlings production and citric graft-stocks. Although this has been one of the alternatives from the survey, it is suggested the first one deployment, because in times of lower demand, there is idle space in some nurseries.

There is still the possibility that the contribution value must be calculated based on the FUNDECITRUS budget allocated to the nurseries inspection. This budget could be divided proportionally among the nurseries. It has been superficially estimated that this activity probably expends about US\$ 460 thousand per year for FUNDECITRUS, also adding a proportional share spent in administrative / communication area. Actually, the technical department consumes about 78% of the budget, the scientific department about 10.7% and administrative / communication around 10.6%, according to FUNDECITRUS data. It is estimated that this activity consumes about US\$ 460 thousand a year, also considering a proportional share spent in administrative / communication area.

Potential Collection Volume

On average, in the last 2 years there have been produced about 14.8 million of seedlings in São Paulo state, according to FUNDECITRUS inspection survey; the revenues from the seedlings totalize about US\$ 177,77 thousand. It means that the sector pays 50% of the costs caused to FUNDECITRUS annually.

6.4 Inputs Suppliers for Citrus Industry

Operational Mechanism

To encourage the suppliers of inputs to contribute with FUNDECITRUS, it may be created a trademark certificate such as “Friend of Citriculture”. The contribution would allow the insertion of the trademark in the communication material of the company and in the product packaging.

It is reasonable to remember a topic presented on page 15. In the research realized in Citriculture Rally, 77% of respondents said that they would give preference to agricultural supplies produced or marketed by companies that contribute to FUNDECITRUS, rather than ones that do not contribute.

Contribution Value

The value of this contribution will be negotiated by FUNDECITRUS with the company that wants to get it. It is suggested that 0.5% of gross revenue with citrus be the contribution value for the company in order to get the trademark. This will be operationalized through the FUNDECITRUS agreements with industry associations, such as ABIMAQ, ANDEF, ANDA, among others. And individual contracts with companies such as BASF, BAYER, SYNGENTA, VALTRA, BUNGE, among others.

FUNDECITRUS will keep on its site the manufacturers list of associated inputs suppliers and it may recommend the purchase of these products.

Revenues Potential Volume

According to Neves and Lopes (2004) calculations, the industry earned in 2003, US\$ 362 million in citriculture. The largest turnover is in the defensive sector (39% share), followed by fertilizer / correctives (29%). With a membership of 30% of companies, the revenues would be approximately US\$ 450 thousand.

6.5 Packing Houses

Just like associated inputs suppliers, the packing houses which would join the fund, would have the possibility to use the Friend of Citriculture trademark (/certificate) The contribution will allow the trademark insertion in company communication materials and in product packaging. Coordination of Defense Agriculture data indicate the existence of more than 500 Packing Houses, operating with a capacity higher than 900 thousand boxes of 48 kg per day.

Contribution Value

The value of this contribution will be negotiated by FUNDECITRUS with the company that wants to get it. It is suggested that 0.5% of gross revenue with citrus be the contribution value for the company in order to get the trademark. This will be operationalized through companies individual contracts. FUNDECITRUS will keep on its site a list of companies associated benefactors and will recommend that its members be in favor of the orange sale for them. After the consolidation of the contribution system, it is suggested that be studied a way in which the Packing House and other agents can be certified by FUNDECITRUS by law.

Revenues Potential Volume

It is estimated that benefactor firms earn about US\$ 240 million. A membership of 50% of them, would add a contribution of US\$ 700 thousand (0.5% of earnings).

6.6 Packaging

The operational mechanism, the contribution value and the volume collected, will be made from the trading between FUNDECITRUS and the packagers. It also suggests 0.5% of profit with orange juice and possibility to use the trademark.

Revenues Potential Volume

It is estimated that the pasteurized juice industry earns around US\$ 46 million. A membership of 10% of them would have a total contribution of US\$ 23 thousand (0.5% of revenues).

It is estimated that companies of ready / fresh juice earn around US\$ 10 million. The membership of 10% of them, would add a contribution of US\$5 thousand (0.5% of revenues).

Therefore, they could contribute with US\$ 27,11 thousand in the first year.

If the memberships increase 40% in the third year, the packages (NFC and fresh juice) would contribute around US\$ 114 thousand.

6.7 Government

Operational Mechanism

As the citrus activity is very the important for the State of São Paulo, in terms of providing jobs, foreign exchange, and economic development, and also it is been heavily impacted by threats of pests and diseases, especially greening and CVC, it is recommended a stronger inserction of the State in FUNDECITRUS. This inserction must be done through many ways, with a great support from the Agriculture and Supply Secretariats. Some of these are suggested below.

It is suggested that the FUNDECITRUS negotiate with the state government to transfer to the health protection department 50% of taxes collected in tolls generated from the loads handling of citrus chain (in natura fruit and citric products). Estimatives made by PENSA in 2004, in the Quantification and Characterization study of Citrus Agroindustrial System, indicated that the citrus chain has paid about US\$ 14,2 millions in tolls in 2003. Currently, it is estimated that this value has been closer to US\$ 20 million for two reasons: exchange rate devalued and export increasing from NFC juice, *Non Frozen Concentrate*, whose volume has been filled the trucks about 5.5 times more than that the condensed juice.

Another opportunity is the recovery of the ICMS credit created in the inputs and machines purchase by the citrus growers. In general, the individual producer does not

do the credit ownership and in the end, he will lose it. The suggestion is the ownership of such credits by the juice industries, who buy the fruit in natura from the producers. This appropriation would be held in the "presumed" form and immediately passed to the producer, discounting the part that would be allocated to FUNDECITRUS ¹.

Contribution Value

It is suggested that 50% of the collected revenues in the toll area should be transferred to FUNDECITRUS. About 5% of the toll value is a tax. Nevertheless, the grower credit of the right (ICMS) represents around US\$ 0.022 per crate of oranges processed. It is estimated that 240 thousand oranges crates are processed into juice for export, thus, the value should be collected must be around US\$ 5,33 million. It is suggested that 20% of the total collected, around US\$ 1million must be directed to FUNDECITRUS (US\$ 0.004 per box processed for export). The value must be re-evaluated every 5 years.

It is estimated that nowadays, the state revenues including tolls and taxes are about US\$ 444 thousands, or 3% of 35.6 million sales. Whereas 50% of revenue is going to be directed to FUNDECITRUS, the association will receive about US\$ 222 thousand.

Out of this, additional contributions should be studied in this so delicate moment for São Paulo orchards.

Revenues Potential Volume

With the toll, the government collects about US\$ 20 million, creating a contribution of US\$ 333 thousand, about US\$ 333 thousand. With the ICMS credit, it is estimated a total of US\$ 1 million, which represents 1 / 5 of the total collected.

Table 4: Solutions for Deployment for Short and Long Time.

Item	Temporary Solution (2 first years)	Purpose from the third year ahead, but that must be worked immediatelly
Citrus Grower Contribution	<p>Maintenance of the actual model for more two harvests.</p> <p>Conquest groups and producers that do not contribute to re-contribute</p> <p>To star immediatelly the procedures to operationalize the 3 rd year purpose.</p> <p>Research of the number of citric trees owned by the citrus growers, through declaratory act or with the government help to use National System of Rural Register (NSRR) or the Rural Territorial Tax (RTT).</p> <p>Use Geo-referencing System</p>	<p>Contribution of US\$ 0.076 per citric tree. This value equates to the current contribution of US\$ 0.04 per box, considering the historical average yield of 1.9 boxes / tree. The purpose from the 3 year ahead can be anticipated when FUNDECITRUS has the correct data for the orchards age. Contributions vary according to the plant age.</p> <ul style="list-style-type: none"> ▪ New Tree = US\$ 0,03 ▪ Grown Tree = US\$ 0,076 <p>Another option is:</p> <ul style="list-style-type: none"> ▪ New Tree = US\$ 0 (zero). ▪ Grown Tree = U\$ 0,089
Orange Juice Industry Contribution	<p>50% of the FUNDECITRUS budget (US\$ 19,50 million in 2007/08) will be divided proportionately between industries in accordance with the market share of each one, based on SECEX data joined.</p>	<p>Gradual decrease of the industry participation in the FUNDECITRUS budget, with the average between 30 to 40%.</p>
Citrus Nurseries Contribution	<p>Contribution of US\$ 0,01 per commercialized stem.</p>	<p>Include the contribution of graft-stocks, with proportional value for the stem based on the production cost.</p>
Inputs Suppliers Contribution	<p>Contribution of 0.5% of gross revenue of the company with the citrus industry. However, the company can use in their communications materials for a trademark such as "Friend of Citriculture," which will certify that the company contributes to the citrus plant protection. Agreement of FUNDECITRUS with industry associations or companies.</p>	<p>Check whether the contribution of 0.5% may increase depending on the trademark recovery and recognition by the citrus growers.</p>

<i>Packing Houses</i> Contribution	Contribution of 0.5% of the company gross with citrus. On the other hand, authorization to use the trademark "Friend of Citriculture.	Join the MAP to link the CFO emission only for products grown or derived from citrus orchards that have a FUNDECITRUS certificate of inspection.
Packaging Companies Contribution	Individual negotiations with the packaging companies. It is also recommended 0.5% of benefits with citrus to use the FUNDECITRUS trademark.	See how this contribution can increase according to the time, if there is the trademark possibility and acceptance are big.
Government Contribution	Negotiate 50% of taxes collected in tolls created from the handling of citrus products to be transferred to the plant defense and a supplementary budget for special projects through FAPESP, Department of Agriculture and other state and federal organizations.	ICMS credit recovery and other forms.

Source: Markestrat, 2007.

Table 5 shows the potential contribution volume from all the possible agents of citrus chain.

Table 5: Revenue Potential Value per Agent.

Agent	Revenue Value in the two first years	Revenue Value from the third year ahead
Citrus Grower Contribution	US\$ 9,6 million (based on 240 thous.boxes)	US\$ 13,33 million (membership of 80%)
Orange Juice Industries Contribution/ Toll	US\$ 9,6 million	US\$ 7,79 million
Citrus Nurseries Contribution	US\$ 177,79 thousand	US\$ 177,79 thousand
Inputs suppliers Contribution (0,5% benefits)	US\$ 443,11 thousand (30% membership)	US\$ 0,68 million (50% membership)
<i>Packing Houses</i> Contribution (0,5% benefits)	US\$ 0,58 million (50% membership)	US\$ 0,80 million (70% membership)
Packaging Companies Contribution (0,5% benefits with orange)	US\$ 27,11 thousand (10% membership)	US\$ 108,44 thousand (40% membership)
State Government Contribution	US\$ 2,22 million	US\$ 1,33 million

Other FUNDECITRUS services (expansion of the activities, targeting the missioning – see3.1.8)	US\$ 0,00	US\$ 1,78 million
Possible Total Result	US\$ 22,64 million	US\$ 25,99 million

Source: Markestrat, 2007.

Other Possible Income derived from Services Provisions

It is suggested that FUNDECITRUS search for more resources from other sources. The service can be an important source in the captation resources. Below there is a list of possible services that are offered by FUNDECITRUS.

- Laboratorial Analysis;
- Sales of statistical data, evolution of pests and diseases, inventory of orchards;
- Development of Complete Information System of the citrus production chain;
- Defense Certification;
- Insurance eradication;
- Organize citrus technical and commercial exhibitions and events;
- Organization of international and national technical trips.

Thus, this work presents some alternatives to operationalize it that may be established in a short period of time (first two years). All of these alternatives were called "Temporary Solution". In addition to presenting these, relatively simple alternatives, this study also suggested more detailed measures, which may be implemented from 3 years from now on. Among the immediate alternatives for deployment, was the contribution of US\$ 0.076 per citrus tree, regardless of the plant age.

This value equals the current contribution value, considering the average productivity of 1.9 boxes per tree. However, this idea has found strong resistance from associations, trade unions and producers, which could compromise the membership and consequently, FUNDECITRUS. In the third year, it is suggested to differ the contribution value according to the age of the citrus plant, with the possibility of postponing the contribution during the unproductive orchard period, starting the contributions from the 4th. year of life ahead.

Firstly, members will inform the number of citrus trees in their existing properties through Declaratory Act. In the future, this information may be obtained articulating with the government to use the National Register of Rural or Rural Territorial Tax (ITR), or even a georeferenced system. About the citrus nurseries, the contribution value suggested is US\$ 0.013 for citrus stem. The graft-stocks will be able to contribute as soon as the new model is consolidated.

Inputs suppliers which work in the citrus industry will be invited to contribute 0.5% of its company gross benefits to the sector. Besides, they may use their communications materials for a trademark named "Friend of Citriculture" which shows that company contributes to the protection of the citrus health. In a research realized in Rally of Citriculture, 77% of interviewed people that said they would give preference to agricultural supplies produced or marketed by companies that contribute to FUNDECITRUS, rather than those ones which do not contribute.

This trademark could also be used by the Packing House, through the contribution of 0.5% of its benefits with citrus for FUNDECITRUS, in agreement with FUNDECITRUS. To develop the model initially implemented, it is suggested a link with MAPA to link the CFO issue only for grown or derived products from citrus orchards that have a certificate of inspection issued by FUNDECITRUS.

The juice industry contribution is extremely necessary in order to have the budget FUNDECITRUS continuing without increasing the citrus growers contribution. Thus, it is suggested that 40% of the association budget be divided proportionally between the juice industries, based on the volume of citrus exported by each of them according to the SECEX / MDIC. The packaging companies are also covered in this study. Their contributions should be negotiated individually with FUNDECITRUS. The government should help the defense plant protection returning a part of taxes collected through the tolls based on the citrus products; is also mentioned the possibility of ICMS recovery.








Finally, this work presents critical factors of success in the new model of contribution implementing, translated in the following needs: (1) provide an explanation to the community about the new FUNDECITRUS' statute, (2) keep and enhance programs of awareness as to the producer importance of FUNDECITRUS, (3) ensure transparency in the collection and use of resources, (4) value external audit to enhance credibility and gain support when joining, among other factors. This work shows the beginning of changes in FUNDECITRUS. The new kind of contribution was not only rethought to fit the new civil code, but especially in order to have this association entering into a new era: more transparent, more inclusive and more democratic.

In spite of the existence of a current direction taken, there are still some questions to be solved:

What other actions can be found to implement this new contribution system? What else should be included to improve the method for Industry Association's Remuneration?









Annex

Table 1: Benchmarking of organizations whose contributions are compulsory.

Organization	 International Dairy Foods Association (IDFA)	 Dairy Australia	 Florida Citrus Department	 SENAI	 SENAC	 SEBRAE	 CAFE DE COLOMBIA
Country	USA	Australia	USA	Brazil	Brazil	Brazil	Colombia
Main Objective	Represent the AGS of American milk	Represent the AGS Australian milk	Promote Florida's citrus products	Train workers for industry sector	Train professionals for commerce and services	Support the development of small enterprises	Foment Colombian coffee
Size	533 companies	9300 farms	Florida's Citrus Industrial Sector	28 industry sectors	All commerce and service sector	Brazilian commercial sector	380000 coffee producers
Collection of Contribution (Source of Income)	Producers: charge on processed volume Other Agents: % of the turnover	Charge on processed volume and Financial aid from the government for R&D	Charge on processed volume	1% on the industries pay rolls Companies with more than 500 employees pay 1% more	% on the commercial sector pay roll Own income from courses and training programs	% on the companies' pay roll	Difference between the price of coffee in foreign market and domestic market, collected by the fund FONC Issuing of Public Bonds
Collection System	Bill	Discount on delivery of raw material to the industry	Discount on delivery of raw material to the industry	Bill <ul style="list-style-type: none"> ▪ Security Note ▪ Federal Revenue Service 	Bill	Through INSS	Collection of export price difference
Collection	Annually	Monthly	Weekly	Monthly	Monthly	Monthly	Monthly
Database renewal	Survey with Members	Survey with milk processors	Forms sent by the Industry	Companies Reports	Companies Reports	Companies Reports	Export Reports

Source: Surveys and interviews conducted by Markestrat, 2007.

Table 2: Benchmarking of organizations whose contributions are not compulsory.

Organization								
	Lactea Brasil	Agopa – Association of Cotton Producers in Goiás State	Incentive Fund for Culture of Cotton in Goiás State	Highlands Country Citrus Growers	Brazil Specialty Coffee Association	Fedeleche - National Federation of Milk Producers	Florida Citrus Mutual	National Cattlemen’s Beef Association
Country	Brazil	Brazil	Brazil	USA	Brazil	Chile	USA	USA
Main Objective	Represent AGS of Brazilian milk	Represent cotton producers in São Paulo and Goiás State	Research and develop cotton cultivars and control pests and diseases	Represent citrus producers of the 3 rd largest producing area in Florida	Promote Brazilian Premium Coffee abroad	Represent Milk producers in Chile	Defend interests of Florida’s citriculturists	Promote American Beef
Size	1.000 members	77 producers	6.000 producers	Not informed	50 associates	80% of the country’s milk	11.000 members	25.000 members
Collection Mechanism	Charge on turnover, in categories of associates	Charge on planted area	Fiscal Reduction ICMS	Charge on planted area	Charge on planted area and exported volume; nominal value in categories of associates	Charge on processed volume	Charge on processed volume	Charge on head traded Nominal value in categories of associates
Collection System	Bill	Bill	Bill	Bill	Bill	Discount on delivery of raw material	Discount on delivery of raw material	Bill
Collection	Monthly	Annually	Monthly	Annually	Monthly	Monthly	Monthly	Monthly
Database Renewal	None	GPS Mapping (annually)	Mapping, Official Invoice, collection document	Annual survey with producers	Certifier (annual visits)	Associations and industries Consults	Agriculture Department Consults	Not informed

Source: Survey and interviews conducted by Markestrat, 2007.

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