

**CHANNEL INCENTIVE PROGRAMS AND THE POWER RELATIONS BETWEEN  
CROP PROTECTION CHEMICAL INDUSTRY SUPPLIER AND DEALERS IN  
BRAZIL.**

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# **CHANNEL INCENTIVE PROGRAMS AND THE POWER RELATIONS BETWEEN CROP PROTECTION CHEMICAL INDUSTRY SUPPLIER AND DEALERS IN BRAZIL.**

## **1. Introduction and Statement**

Agricultural productivity in Brazil has grown in recent decades. In 1960, the country harvested a total of 17,2 million tons of grain in an area of over 22 million hectares. This represents a yield of 783kg/ha. Five decades later, in 2010, Brazilian grain crop productivity had increased 305% and recorded 3.173 kg/ha. On this scenario, Brazil is currently the third largest agricultural producer in the world, only behind the United States and the European Union (SILVA; COSTA, 2012).

Market opportunities in Brazil increased the requests for product registrations by companies of various kinds, for example, Brazilian and foreign manufacturers or importers, totaling an increase of approximately 42% per year between 2006 and 2010. Although there are many competitors in the pesticide industry business, only part of the companies has a significant market share. In 2010 the top 10 highest competitors had 83% of market share, and the third largest had 47% of market share. In this same year, Brazilian pesticide industry totaled US\$ 7,3 billion on sales and between 1990 and 2010, Brazilian market grew 576% while world market increased 83%. In Brazil, it is estimated that 26% of pesticides sales are made directly to large agricultural producers, 24% to cooperatives and 50% to dealers. (SILVA; COSTA, 2012). Thus, this latter plays an important role and some industries tend to create programs and incentives relationships with these distribution channels.

Incentive programs in the distribution channel may be understood as incentives to govern its transactions between firms, including both suppliers and distributors, particularly when used by suppliers towards dealers. Such programs are designed to motivate the channel member active support for the supplier's agenda. Moreover, these programs are used to allocate resources and functions, control channel actions, promote channel member adaptation, manage conflicts and, finally, reach objectives. Incentive programs have been largely implemented by manufacturers trying to influence or control channel members in order to encourage them to strengthen the manufacturer's market positioning, either by selling to or supporting final customers (GILLILAND, 2003). Incentive programs are important to achieve the interest of the distributor and maintain a relationship with him.

Considering channel's influence and control, it is important to mention the notion of power that may have a strong impact on how channel incentives are used by manufacturers, given a more or less powerful dealer. Power in the marketing channel has been related to the relative dependence theory. The more channel member A depends on channel member B, the more powerful B is going to be relative to A (FRAZIER, 1999).

The power distribution among manufacturers and dealers play a key role in defining the dimensions that comprise the incentive programs. These incentive programs can be understood in four dimensions, that are: measures control, benefits to the channel, exclusivity and levels formalization. In addition, different research lines such as the behavioral marketing channel literature and the relational governance literature have suggested how to create and maintain relationships with channel members, the former focusing on the role of power, trust, and conflict management as presented in several works of Louis Stern, and the latter focusing on aspects such as the role of bilateral power, long-term agreements, and commitment (Anderson and Weitz, 1992; Ganesan, 1994; Heide, 1994).

Taking into account the scenario above this paper aims to validate the theoretical framework proposed by Castro, Neves and Akridge (2009), which comprehends the role of incentives programs in the relationship between manufacturers and agricultural dealers and the role that power plays in influencing the incentives programs structure. This present study is important because the quantitative test can demonstrates or scrap the theoretical model.

## **2. Theoretical Referential**

According to Stern et al (1996), distribution channels are defined as a role of interdependent organization involved in the product availability or service process. Thus, this process aims supply products or services to customers, in a more efficient way. In this sense, is possible to say that there is a channel member responsibility in the performance of marketing flows (COUGHLAN et al., 2002). Understanding dealer existence requires the analysis of 2 perspectives: the costumer's and the manufacturer's, as both may have an interest in the channel existence (BUCKLIN, 1965). In the client's case, it might be advantageous because they can buy smaller lots, more diverse items, spend less time waiting and have a bigger possibility of channel financing. For manufacturers it is important, because the dealer can reach the client's according to the points mentioned above, reducing risks and facilitating transactions. Furthermore, the dealer can be seen as an information source, because they know the local market. However management problems between manufacturers and dealers may happen. In this case, dealers usually behave as "intermediate customer", competing with other dealers from the same company and with direct sales (FRIEDMAN; FUREY, 1999). It desirable that there should exists a minimum threshold level of trust to make relation-specific investments (CORSTEN et al, 2011).

When the objectives are different, the dealer may reject relationship plans and incentive programs with manufacturers (GILILLAND, 2003). Sometimes, dealers prefer to focus on immediate gains and little intervention from the supplier (GILILLAND; BELLO, 2002) and if there is an attempt to impose a business model and inflexibility by the manufacturers' side, this can lead to channel conflicts (HARDY, MAGRATH, 2003). Thus, the incentive plan is a tool for building relationships with channels (ALVARES, 2006).

The incentive program is important because it defines the relationship concept, the rights and obligations, the financial and non-financial values. The incentive programs don't tell everything about the relationship between crop protection chemical industry supplier and dealers, but it is important to establish a relationship between these two players (FRAZIER; SUMMERS, 1984). According to McFarland, Bloodgood and Payan (2008) influence strategies used by chemical industry in the relationship with dealers are copied by them to create proximity with the final client. For all these factors, incentive programs need to be carefully elaborated. Castro, Neves and Akridge (2009) investigate the nature of channel incentives, such as their specific components and how they are implemented on crop protection chemical industry.

## 2.1. Power structure

The result found in Meehan and Wright (2011) research, provides some evidences of a high level similarity between roles in channels, taking into account the power relations. The differences that exist between roles are related to the relative positioning of power priorities, with buyers favoring commercially orientated areas (terms of business and contract issues like prices, terms and conditions, choice of other supplier) and sellers favoring attitudes (perceptions held by each part and covered attitudes toward the product/service). It is important to note that the scope of commercial influence is much broader than only price to achieve cost reduction and dealers have a higher perceived potential to influence buyer-seller relationships. Besides that, buyer's (dealers) primary power priorities center on costs and seller's (manufacturers) priority center on long-term goal profitability (MEEHAN; WRIGHT, 2011).

In a more specific literature, on the interview made by Castro, Neves and Akridge (2009) in Brazil and United States it is possible to analyze differences in power distribution between dealers and manufacturers. Three groups consolidate several factors that help explain these differences, as can be seen in table 1.

		Brazil	USA
Manufatorer brand power	Presence of generic products	Low	High
	Presence of channel private label	Absence	High
	Incidence of GMO	Low	High
Network effects	Wholesaling	No evidence	Preponderant
	Exclusive dealership	High	Low
	Concentrated retailing	Less	More
Channel member functions	Manufacturers trade credit	High	Low
	Service	Narrower scope	Oriented dealers

**Table 1. Difference in power distribution between dealers and manufacturers in Brazil and USA.**  
**Source: Elaborated by authors based on Castro, Neves and Akridge (2009)**

Manufacturer brand power in Brazil is higher than in US. Before 2009, in Brazil there was low incidence of generic products, but now we can observe that the generic pesticides accounting for almost 50% of the financial volume and 80% of the quantities sold (SILVA; COSTA, 2012). We can also observe, practically an absence of private label channels and low incidence of GMO (Genetically Modified Organisms), the opposite of US. Considering network effects, some different arrangements are possible. In Brazil, there is no evidence of wholesaling in this industry, the leading manufacturers use a *quasi-exclusive* dealership arrangement organized by territory sales and the retailing is less concentrated in Brazil. Considering channel member functions it is possible to notice that manufacturers play a fundamental role on financing agricultural production in Brazil (CASTRO; NEVES; AKRIDGE, 2009). According to Sindag<sup>1</sup> (National Industry Syndicate of Defense Agricultural Products), the purchases financing made by the pesticides manufacturers have deadlines associated with the corresponding harvest. In 2010, the deadline reached an 180 days average (SILVA; COSTA, 2012). In US, credit management is also performed by dealers, but capital comes from different sources, such as banks and cooperatives. Last but not

<sup>1</sup> Portuguese acronym

least, service scope in Brazil is limited. Product application and other traditional agronomic services are performed mostly by growers. In US, most of the crop protection application is done by dealers (CASTRO; NEVES; AKRIDGE, 2009).

## **2.2. Performance measures and power**

The first part of performance measure definition refers to the pursuit of performance indicators. Basically, the sales management literature states that results are related to physical and financial volume of sales, market share and profit margin achieved by a channel (CRAVENS, et al, CHURCHILL, 2000).

Performance measures are composed of input (for example, if a manufacture demand activities from the dealer, like to prepare market report or to conduct a final consumer paying ability evaluation) and output control mechanisms related to sales (CELLI; FRAZIER, 1996). The composition of performance measure within incentive programs might change in the following direction depending on where power is concentrated. When a power center is localized on manufactures, or even bilaterally, when the center of power is not easily defined and both parts are dependent on each other equally (HEIDE, 1994) the incentive program may vary in the following way: manufactures with more power are harder to be replaced and get naturally more attention from the dealers (FRAZIER; SOMMERS, 1984). When a dealer has much less to lose if the relationship ends than the manufacturer does, the manufacturer might find it difficult to exert control over the dealer activities and establish input performance measures (CELLI; FRAIZER, 1996). Corsten et al (2011) found that trust is the dominant information exchange driver, but surprisingly, information exchange does not have an effect on cost performance. Regardless, the finds of their study should create awareness among managers that identification plays a clear role in operational.

According to Castro, Neves and Akridge (2009), in Brazil, manufacturers programs use segmentation. For example: (1) output performance measures - market share in the sales territory; joint market share (it considers other dealers in the same region, if they exist); volume purchased from the manufacturer. (2) Input performance measure – share of crop protection products in dealers, dealer credit rating. In United States, some emphases are given to output control measures, like sales volume, earlier purchases, bulk purchases and taking early stocks positions. Input control measures are limited to the necessity of presenting a business plan with a strong emphasis on sales forecast and the use of software to transmit information to manufacturer.

This study shows that in US, the power is concentrated on the dealer and there is a strong predominance of output control measures. In Brazil, where power is concentrated in manufactures, many different input measures are in place (CATRO; NEVES; AKRIDGE, 2009).

## **2.3. Benefits**

According to Frazier and Sommers (1984), influence strategy literature is classified in two different ways. The first strategy aim to change dealer perception sharing information and requirements. They are based on motivating the dealer to perform important tasks. The second strategy is based mostly on motivating the dealer by offering a reward or potential penalties, with no concern about changing dealer's perception. This last strategy involves reward, threats and legal strategies (contract). Other point of view is the benefits and rewards that can be given to a channel in different ways, as proposed by Gililland (2000). The different ways presented are: (1) specific investments made by the manufacturer in the relationship with the dealer such as educational programs to dealer staff, (2) bonuses paid in product or even cash,

(3) advertising paid by the manufacturer promoting the dealer in the region, prizes for customers to buy specifically from the dealer, among others, (4) further information sharing.

Castro, Neves and Akridge (2009) presented a component list combining the influence channel and the benefits. (1) high impact – high impact incentives and reward, (2) penalties – threats and legal strategies to actually reduce an existing benefit level, (3) information sharing – influence strategies of requirement, (4) pledges to the channel, (5) market support – final client encouragement.

#### **2.4.Exclusivity in the Manufacturer dealer relationship**

Exclusivity in marketing channels depends on a considerable evolution of the channel members relationship, as introduced by Dwyer et al (1987). It is expected that exclusivity will be implemented where the manufacture will have more power over the dealers or where power is a bilaterally structure, because it is the manufacture's interest to set exclusive territories to control dealer efforts and avoid intra-brand competition (COUGHLAN et al 2002). If dealer concede less control to a manufacturer, being less dependent, it will not provide product category exclusivity to a manufacturer. It may use its multiple supplying sources to strategically get better deals from competing to a manufacturer. But, on the other hand, the manufacturers may not establish exclusive territories, because they have to maximize their presence in the market place, rather than strive coordinating ideal channel efforts (ANDERSON; WEITZ, 1992).

Both in Brazil and in United States, exclusivity is not present. But in Brazil, the governance mode is closer to exclusivity. While in US dealer have 3 or 4 leading manufacturers, in Brazil, there is just one major crop production and more 1 or 2 secondary to complete product line. It is possible to see that the more powerful the manufactures are, the more exclusive is the incentive programs (CATRO; NEVES; AKRIDGE, 2009).

#### **2.5.Contract formalization and incentive programs**

According to Lusch and Brow (1996), channel incentive programs are tools implemented to align channel members. Incentive programs might be composed of many implicitly elements and they may vary according to where the power center is. Long term implicitly contracts can be understood as undeclared agreement between parties. As they cannot legally be fulfilled, one of the alternatives to make it viable is the threat of losing future business (BESANKO, 2006). Gililand and Bello (2002) suggest that manufacturers that have relatively more power will probably want a contract to formally place their demands to dealers in incentive programs. However, if manufactures have less power, they may try a more implicit strategy, building a situation more favorable to them.

Castro, Neves and Akridge (2009) found just that. In Brazil, where exist a major exclusivity relation, incentive programs are more explicit and formal. The agreement is clear and is written focusing the recognition of the dealer and manufacturer. In US, materials are simpler and clear, aim reaching the performance level on output measures and, mostly, there is a great level of spoken agreement and tailored solutions to dealer.

A literature review shows an evident change in view of what can be considered effective relationship. Historically, it was recommended low involvements with suppliers avoiding dependence on a single manufacturer. Arguments defending this position were guided by (1) the increase of uncertain transactions, because there was the fear the supplier might not be able to fulfill its obligations, (2) technological dependence on the manufacturer, (3) the fact that low involvement would encourage competition among suppliers and, by being exclusive, there could be no price reduction. Besides, low-involvement relationships can be

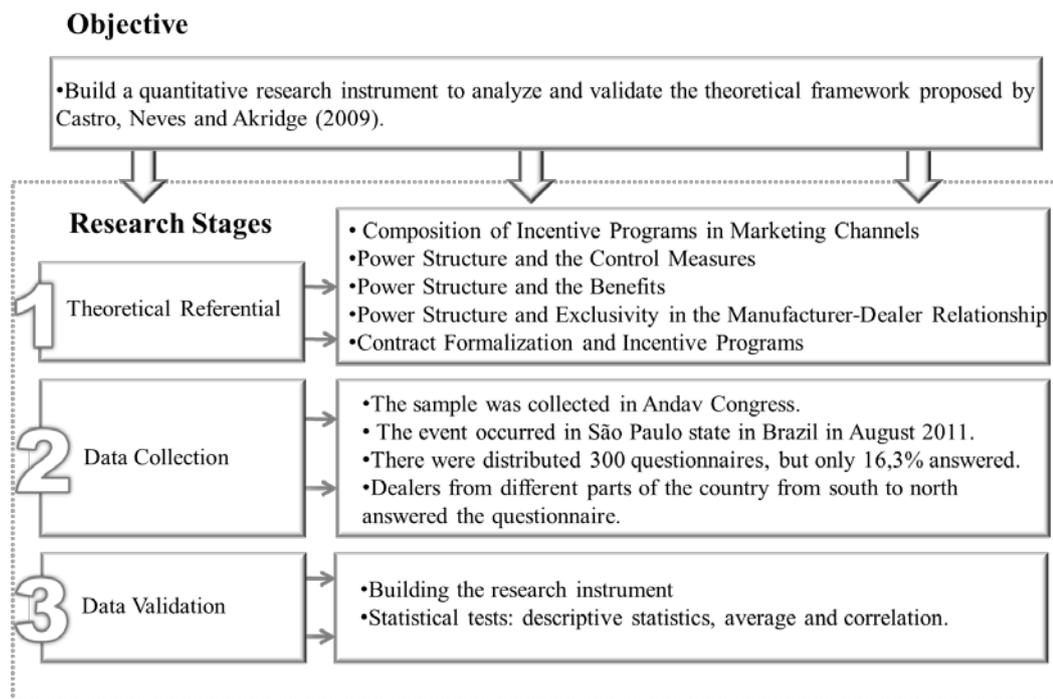
spiced with low moving cost. However, may adversely affect the direct purchase cost. Since the economic consequences of high involvement are associated with benefits relationship. When there is a strong involvement between supplier and buyer, cost reduction in the production process, improvements in service and flexibility can be achieved. Moreover, it is possible that the dealer take advantage from the skills and capabilities of the partner, to improve the quality of its service. Yet, high involvement shows disadvantages, among them are: costly relationships, because they require coordination adaptation and interaction. Thus, the high involvement only makes sense if the relationship benefits outweigh the costs involved. It is noteworthy that high involvement is only possible when both parts are willing to relate with each other (GADDE; HÅKANSSON, 2001). Bommel (2011) said that relationship between dealers and manufacturer can be characterized by factors such as trust, reputation and cooperation of information throughout the network. It should be noted that, even when there is a strong relationship of trust, it might be interesting to draw up contracts between the parts, once they define trade terms and protect its members from an opportunistic behavior transaction (BESANKO, 2006).

### **3. Procedures**

This paper aims to validate the conceptual model proposed by Castro, Neves and Akridge (2009), which presents a theoretical framework for understanding marketing channel incentive programs. In the first study, a multiple case study strategy was implemented in a cross-country analysis and three firms from the crop protection chemical industry were selected, being the same firm both in Brazil and the United States.

In this present study, a quantitative work was conducted with agricultural dealers in Brazil to validate the nine following proposition related to the theoretical framework presented.

1. Incentive programs for distribution channels consists on demands made by the manufacturer and by benefits delivered according to performance levels.
2. Incentive programs with distributors in the power center will mainly consist of results control
3. Incentive programs with manufacturer in the power center will mainly consist of results and activities control
4. Incentive programs with dealer in the power center, benefits will mainly consist in short-term benefits
5. Incentive programs with manufacturer in the power center, benefits will mainly consist of long-term and short-term benefits
6. When power center is established on manufacturer, exclusivity will be more embedded in incentive programs
7. When power center is established on dealer, exclusivity will be less embedded in incentive programs
8. Channel incentive programs will be more explicit when the manufacturer has power over the dealer
9. Channel incentive programs will be more implicit when the dealer has power over the supplier



**Figure 1: Stage of activities**  
Source: Elaborated by authors

The sample was collected in Andav Congress. Andav is a national association of agricultural and veterinarian inputs distributors. The event occurred in São Paulo state, Brazil, in August 2011. 300 questionnaires were distributed, but only 16,3% answered, so the sample has forty-nine dealers from different parts of the country, from south to north. Due some questionnaire are incomplete we have not to consider 10 answers, working with a sample of 39 retailers. Figure 1 illustrates the procedures.

To analyze the data gathered we use a statistical software SPSS (Statistical Package for the Social Sciences) and conduct some descriptive statistics, average analyses and correlation.

### 3.1. Building the research instrument

To better collect information from participants, we built a questionnaire based on the theoretical referential presented. The following table (table 2) shows the affirmatives as well as the authors whose were base for the propositions construction:

	<b>Questions</b>	<b>Authors</b>
Q1	If I discontinue my relationship with the main agrichemicals supplier it will take a long time to recover the same level of sales in my area	Frazier and Sommers (1984), Heide (1994), Celli and Fraizer (1996).
Q2	If your main agrichemicals supplier breaks the relationship with you, your business will take a long time to recover the same level of sales.	Frazier and Sommers (1984), Heide (1994), Celli and Fraizer (1996).
Q3	Your main agrichemicals supplier can significantly influence the way you define your company sales goals	Castro, Neves and Akridge (2009)

	<b>Questions</b>	<b>Authors</b>
Q4	Your main agrichemicals supplier significantly influence the way your company hires and manages people	Castro, Neves and Akridge (2009)
Q5	Your main agrichemicals supplier significantly influence the way your company offers credit to customers	Castro, Neves and Akridge (2009)
Q6	Your main agrichemicals supplier significantly influence the way your company manages information (software, data and reports)	Castro, Neves and Akridge (2009)
Q7	Your main agrichemicals supplier significantly influence the way your company build future plans, such as, launching new product lines, new business units, new facilities, etc.	Castro, Neves and Akridge (2009)
Q8	Your main agrichemicals supplier significantly influence the way your sales team visit customers	Castro, Neves and Akridge (2009)
Q9	I get financial resources (rebates) as a reward for a good job conducted to my main agrichemical supplier	Frazier and Sommers (1984), Gililland (2000), Lusch and Brow (1996), Castro, Neves and Akridge (2009)
Q10	Financial benefits are a more common reward practice than others, such as service or supplier support .	Frazier and Sommers (1984), Gililland (2000), Lusch and Brow (1996), Castro, Neves and Akridge (2009)
Q11	I receive support from my main agrichemical supplier for my business management	Frazier and Sommers (1984), Castro, Neves and Akridge (2009)
Q12	I receive support from my main supplier for investments in structure	Frazier and Sommers (1984), Gililland (2000), Castro, Neves and Akridge (2009)
Q13	I receive support from my main supplier to make events for selected customers.	Frazier and Sommers (1984), Gililland (2000), Castro, Neves and Akridge (2009)
Q14	I receive support from my main supplier for regional promotional activities	Frazier and Sommers (1984), Gililland (2000), Castro, Neves and Akridge (2009)
Q15	In the main operational region, there are many competitors with products of the same brands.	Dwyer et al (1987), Anderson and Weitz (1992), Coughlan et al (2002).
Q16	I own a contract that details the relationship between the reseller and my main supplier	Gililland and Bello (2002), Besanko, 2006

**Table 2. Questionnaire and literature approach**  
**Source: Authors base on theoretical referential**

Based on questions presented above, and in order to facilitate the data analysis, it was created an index to better analyze and understand the results. For example: dependence index that refers to the dependence of the dealer regarding the supplier, exclusive index that is related to competitors with the same brand in a near territory, activity index that is related to the retail activities supplier level of influence. The table 3 shows the index and their goals.

<b>Index</b>	<b>Calculus</b>	<b>Analysis</b>	<b>Goals</b>
Dependence Index	Q2 – Q1	The lowest it is, the greater the supplier dependency on the distributor	Check the dependence level between manufacturers and distributors

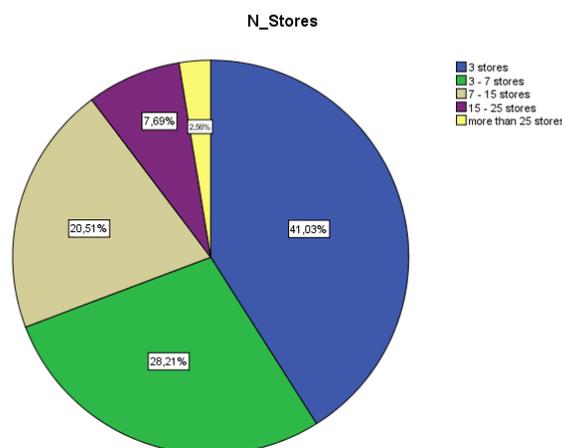
Index	Calculus	Analysis	Goals
Result Index:	Q3	The higher it is, the greater the supplier's influence on the distributors' outcomes.	Check the influence level of input suppliers on the definition of distributors' sales goals.
Activity Index:	Q4 + Q5 + Q6 + Q7 + Q8	The higher it is, the greater the supplier activity on its distribution channels.	Check the activity level of input suppliers in their distribution channels.
Supplier Influence Index	Q3 + Q4 + Q5 + Q6 + Q7 + Q8	The higher it is, the greater the supplier activity on its distribution channels. .	Check the supplier's influence on the distributors results and activities..
Financial Index (Short benefits)	Q9 + Q10	The higher it is, the common the financial rewards for the distributor	Check the distributors which receive financial rewards from their suppliers
Benefits Index (Long benefits)	Q11 + Q12 + Q13 + Q14	The higher it is, the bigger the number of long-term benefits distributors receive from the suppliers.	Check IF, in addition to short-term benefits (financial), distributors also receive long-term benefits.
Total benefits Index	Q9 + Q10 + Q11 + Q12 + Q13 + Q14	The higher it is, the bigger the benefits distributors receive from suppliers.	Check the total level of benefits received by distributors both in the short and long-terms.
Exclusivity Index	Q15 + % of revenues with main supplier.	The lowest it is, the more exclusive the relationship between distributor and supplier.	Check the exclusivity level between distributors and suppliers
Contract Index	Q16	The higher it is, the more formal the relationship between distributor and supplier.	Check the presence of contracts in the relationship between distributors and suppliers.

**Table 3. Research Index**  
Source: Authors

The next section will point out the main results of this research.

#### 4. Results

To validate the proposal, it was used a descriptive analysis. We can observe that almost 42% of the companies surveyed have up to 3 stores, only one has more than 25 stores



**Chart 1 – number of stores**  
Source: Authors

We also note that most of them have revenues between 5 and 20 million reais, as it can be seen on table 4.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< R\$ 5 millions	2	5,1	5,1	5,1
	R\$ 5 - 10 millions	9	23,1	23,1	28,2
	R\$ 10 - 20 millions	13	33,3	33,3	61,5
	R\$ 20 - 40 millions	4	10,3	10,3	71,8
	more than R\$ 40 millions	11	28,2	28,2	100,0
	Total	39	100,0	100,0	

**Table 4. Protection chemical revenues**  
**Source: Authors**

It is noticed that on table 5 companies that have more stores have higher revenues with agrochemical. Probably, due to the market share the dealer can access.

Count		Rev_AChem					Total
		< R\$ 5 millions	R\$ 5 - 10 millions	R\$ 10 - 20 millions	R\$ 20 - 40 millions	more than R\$ 40 millions	
N_Stores	3 stores	2	7	7	0	0	16
	3 - 7 stores	0	1	5	3	2	11
	7 - 15 stores	0	1	1	1	5	8
	15 - 25 stores	0	0	0	0	3	3
	more than 25 stores	0	0	0	0	1	1
	Total	2	9	13	4	11	39

**Table 5. Number of stores x agrochemical revenues**  
**Source: Authors**

Still, according to the descriptive analysis, it can be observed (see Table 6) that most distributors receive some kind of financial reward for their work with suppliers. The second most highlighted variable was the existence of many distributors acting with the same brand in the same region, featuring a strong competition in areas where the surveyed retailers operate. The third point that has mostly stood out was the suppliers' support on distributors' events directed to customers. Finally, the fourth variable that deserves to be emphasized is the supplier influence on the way distributors set their sales goals. According to the responses, on these four factors, distributors are the ones who mostly agree with the statements presented.

**Descriptive Statistics**

	N	Sum	Mean	Std. Deviation	Variance
Q9	39	177,00	4,5385	,91324	,834
Q15	39	149,00	3,8205	1,21117	1,467
Q13	39	145,00	3,7179	1,07480	1,155
Q3	39	136,00	3,4872	1,07292	1,151
Q10	39	135,00	3,4615	1,16633	1,360
Q14	39	124,00	3,1795	1,18925	1,414
Q11	39	122,00	3,1282	1,26032	1,588
Q7	39	118,00	3,0256	1,22447	1,499
Q8	39	102,00	2,6154	1,09100	1,190
Q16	39	97,00	2,4872	1,68385	2,835
Q6	39	91,00	2,3333	1,30451	1,702
Q5	39	91,00	2,3333	1,19942	1,439
Q4	39	82,00	2,1026	1,04617	1,094
Q12	39	81,00	2,0769	1,06090	1,126
Valid N (listwise)	39				

**Table 6. Descriptives statistics**  
**Source: Authors**

Seeking the correlation between variables that can influence the dependence between distributors and suppliers, a correlation analysis was made with questions 3-8, which composes the Supplier Index, question 11-14, which correspond to the Total Benefits Index, and question 16, which verifies the existence of contracts between distributors and manufacturers. Given the sample size and the fact that this is a research related to social science, a 0,4 correlation coefficient was considered as moderate, and acceptable for this research (see table 7).

We can note that there is a relation between the influence manufacturers apply on setting sales goals and the influence manufacturers have in defining the sales visits that will be undertaken. This could happen due to the fact that more and more suppliers are interested in assist their dealers to increase their market share and straighten the relationship with channel customers.

Another point to be highlighted is the relation between the support suppliers provide to channels for events with clients and promotional activities. It is noteworthy that promotional activities supports as experimental areas, demonstration fields, lectures, networking events, are common practices in the distribution industry of inputs, and most of these events are focused on retailer customer.

Finally, the last point to be emphasized is the relationship between the support suppliers provide to the channels management and the support for promotional activities. One of the possible causes of this alliance may be the fact that distributors are increasingly concerned about differentiating themselves in the implementation of loyalty programs and participating on the channels management with capacitation programs, and training has been one of the alternatives found.

<b>Variable 1</b>	<b>Correlation</b>	<b>Variable 2</b>
Q3 – Influence on sales goals	0,569**	Q8 – Influence on sales visits
Q13 – Support for events with clients	0,535**	Q14 – Support for promotional activities
Q11 – Support on channel management	0,529**	Q14 – Support for promotional activities

Variable 1	Correlation	Variable 2
Q7 – Influence on investment and future plans	0,446**	Q13 - Support for events with clients
Q5 – Influence on credit policies	0,442**	Q7– Influence on investment and future plans
Q6 – Influence on information management	0,407**	Q8 – Influence on sales visits

Correlation is significant at the 0,01 level (2-tailed)

**Table 7. Variables correlation**  
Source: Authors

#### 4.1. Theoretical Propositions Analysis

In this section about the survey results, it will be presented the analyses made in order to validate the theoretical propositions presented in Castro, Neves and Akridge (2009) qualitative study. Correlation analyses were made between the indexes created in this study (see Table 3) and the differences among the centers of power between distributors and manufacturers, represented by Dependence Index. It should be noted that when the power in the relationship was neutral ( $Q2 - Q1 = 0$ ), no analyses were made, once the propositions presented were based on the imbalance of power. So when  $Q2 - Q1 < 0$ , the center of power lies on the distributor, and when  $Q2 - Q1 > 0$ , the center of power lies on the manufacturer.

The first analysis focus on proposition 2: *Incentive programs with distributors in the power center will mainly consist of results control*

Thereby, the correlation between the Dependence Index and Result Index was analyzed. It can be observed that when the center power is on the distributors, the incentive programs present a moderate correlation with the results control. However, as already deployed in this study, the correlations considered acceptable must be above 0.4, once the e study sample was not very significant. This shows that for the distributors that are in the center of power incentive programs may be related to the control of sales (see table 8)

**Correlations**

		Dependence_ Index	Result Index
Dependence_Index	Pearson Correlation	1	,499
	Sig. (2-tailed)		,099
	N	12	12
Result_Index	Pearson Correlation	,499	1
	Sig. (2-tailed)	,099	
	N	12	12

**Table 8. Results control Index and Incentive programs**  
Source: authors

Proposition 4 (*Incentive programs with dealer in the power center, benefits will mainly consist in short-term benefits*) pointed out the relation between short-term benefits and incentive programs, when distributors were in the center of power. After performed the correlation analysis, it was possible do realize that the Financial Index (short-term) was not associated with the fact that distributors have a greater power in the relationship. On the other hand, the Benefits Index (long-term) seemed to have a greater relationship with distributors which have more power in the relationship. Thus, the proposition that incentive programs are mainly short-term benefits for distributors whit greater power in the relationship cannot be accepted (see table 9).

		Dependence_ Index	Financial_ Index	Benefits_ Index
Dependence_ Index	Pearson Correlation	1	,063	,418
	Sig. (2-tailed)		,845	,177
	N	12	12	12
Financial_ Index	Pearson Correlation	,063	1	,047
	Sig. (2-tailed)	,845		,884
	N	12	12	12
Benefits_ Index	Pearson Correlation	,418	,047	1
	Sig. (2-tailed)	,177	,884	
	N	12	12	12

**Table 9. Sort-Term and Long-Term Indexes and Incentive programs**  
Source: authors

The last proposition that can be explained by the analyses performed was proposition number 6 (*When power center is established on manufacturer, exclusivity will be more embedded in incentive programs*). Although, Exclusivity Index was not able to manifest the relation with incentive programs, when the power was centered in the manufacturers. Aiming to identify a possible relationship, it was determined that the variables belonging to the Exclusivity Index would be analyzed separately. Thus, it was possible to observe that the distributors' highest sales contraction with a single supplier is correlated with greater dependency on manufacturers (see table 10).

		Dependence_ Index	Supplier	Q15
Dependence_ Index	Pearson Correlation	1	,553	,142
	Sig. (2-tailed)		,122	,715
	N	9	9	9
Supplier	Pearson Correlation	,553	1	,028
	Sig. (2-tailed)	,122		,943
	N	9	9	9
Q15	Pearson Correlation	,142	,028	1
	Sig. (2-tailed)	,715	,943	
	N	9	9	9

		Dependence_ Index	Exclusivity_ Index
Dependence_ Index	Pearson Correlation	1	,209
	Sig. (2-tailed)		,589
	N	9	9
Exclusivity_ Index	Pearson Correlation	,209	1
	Sig. (2-tailed)	,589	
	N	9	9

**Table 10. Exclusivity Index and Incentive programs**  
Source: authors

The others propositions were not possible to be analyzed due the correlation with the indexes created were not significant.

## 5. Conclusion

The Brazilian market has a strong competition between agrochemical suppliers. One way to reach the market (customers) is to have strong distributions channels. We can observe that policies of benefits and good products can help to create strong dependent relations.

One of the main results of this study was the important correlation between the variables related to the manufacturers influence in distributors' management. The most significant was the relationship between the sales goals and customer service planning. This strong relation shows that suppliers are increasingly concerned to boost their market share in regions where it operates, and develop their products in the distribution channels.

Given the analysis, it was also possible to note that most of the investments made by the suppliers along the channels aim to develop activities with dealer customers. This point should be considered by the distribution channels and manufacturers of raw materials, given

that, currently most manufacturers offers only supports to their distributors related to customer relationships, however it is possible to not instead an increase in demand for support for chain management and planning.

We point out that most of the propositions presented in the study of Castro, Neves and Akridge (2009), could not be validated with the statistical analyzes. This may be related mainly to the restricted size of the sample used. However, three of the nine propositions could be analyzed with the results presented in this study. The main findings show that when distributors in the power center incentive programs are more related to results control. This could be related to the fact that the suppliers are interest in grow their market share in areas which suppliers have a great participation. And due that they request a faster dealer growth.

A second conclusion is that incentives programs are not only short-term incentives when dealers in the center power. Moreover, these same distributors points that incentive programs are composed by long-term benefits such as support on information management, influence in credit management and incentives on events with the retailers' clients.

We, also, point out that the survey instrument built in this study, taking the questionnaire with the propositions, and the analytics index can be highlighted as one of the major strengths of this preliminary work.

Finally, we emphasize that the analysis presented here are still need to be developed, especially with a larger sample. As a future research we are conducting a new data collection with approximately 100 distributors in one of the most important states in the Brazilian for agrichemical distribution industry. We, thus, point out as future researches the inclusion of some variables in the study based on the theoretical referential presented in this work. First future studies can include the influence of contracts in incentives programs and second the studies, also, can include an analysis of new ways of channels relationship management and the relation with channel exclusivity.

We hope with this new sample that the propositions Castro, Neves and Akridge (2009) could be tested and validated, through the analysis based on the research instruments presented this study.

## References

- ALVARES, F.J.S.M; (2006). A aplicação das variáveis de Trade Marketing Mix nas empresas de produtos de consumo no Brasil: Um estudo da frequência de Aplicação. Anais do 1º encontro de Marketing da Anpad (EMA), Rio de Janeiro.
- ANDERSON, E., & WEITZ, B. (1992). The Use of Pledges to Build and Sustain Commitment in Distribution Channels. *Journal of Marketing Research*. Vol. XXIX, February, 18–32.
- BESANKO, D. et al. (2006). **A economia da estratégia**. Tradução Bazán Tecnologia e linguística. 3.ed. Porto Alegre: Bookman.
- BOMMEL, H.V.M.( 2011). A conceptual framework for analyzing sustainability strategies in industrial supply networks from an innovation perspective. **Journal of Cleaner Production**. v. 19, p. 895-904.
- BUCKLIN, L.P.(1965). Postponement, Speculation and the Structure of Distribution Channel. *Journal of Marketing Research*, v.2, p. 26-31.
- CASTRO, L. T.; NEVES, M. F.; AKRIDGE, J. T.(2009). On the use of Channel Incentive Programs: A cross-country Analysis on the crop protection industry in Brazil and USA. In: International Food and Agribusiness Management Association., Budapest. *Eletronic Proceeding...*Budapeste. IFAMA, 2009.
- CELLY, K.S.; FRAZIER, G.L. (1996). Outcome-based and Behavior-based Coordination Efforts in Channel Relationships. *Journal of Marketing Research*, v. XXXIII, p.200-210.
- CHURCHILL, A.G, et al. (2000). *Sales Force Management*. Boston: Irwin McGraw-Hill, 6a ed. 727, p.
- CORSTEN, D. et al (2011). The effects of supplier-to-buyer identification on operational performance – an empirical investigation of inter-organization identification automotive relationships. *Journal of Operation Management*. 29, p. 549-560.
- COUGHLAN, A.T. et al (2002)*Canais de Marketing e Distribuição*. 6.ed. Porto Alegre: Bookman.
- CRAVERNS, D.W. et al. (1993). Behavior-based and outcome-based salesforce control systems. *Journal of Marketing*, v.57, p. 47-59.
- FRAZIER, G. (1999). Organizing and Managing Channels of Distribution. *Journal of the Academy of Marketing Science*, 27(2), 226–240.
- FRAZIER, G.L; SUMMERS, J.O.(1984) Interfirm Influence Strategies and Their application within Distribution Channel. *Journal of Marketing* , v.48, p. 43-55.
- FRIDMAN, L. G.; FUREY, T. R.(1999);*The channel advantage* London: Butterworth Heinemann, 228 p.
- GADDE, L.E; HÅKANSSON, H. **Suply Network Strategies**. – John Wiley and Sons, 2001. p. 135-153

GANESAN, S. (1994). Determinants of Long-Term Orientation in Buyer-Seller Relationships. *Journal of Marketing*, 58, 1–19.

GILLILAND, D.I.; BELLO, D.C. (2002). Two sides to Attitudinal Commitment: the effect of calculative and loyalty Commitment on enforcement Mechanisms in Distribution Channel. *Journal of the Academy of Marketing Science*, v.30, n.1, p. 24-43.

GILLILAND, D.I. (2003). Towards a Business-to-Business Channel Incentive Classification Scheme. *Industrial Marketing Management*, 32, 55–67.

HARDY, K. G.; MARGRATH, A.J.(2003). Dealing with Cheating in Distribution. *European Journal of Marketing*, v. 23, n.2, p. 123-129.

HEIDE, J.B. (1994). Interorganizational Governance in Marketing Channels. *Journal of Marketing*, 58, 71–85.

LUSCH, R.F.; BROWN, J.R.(1996). Interdependency, Contracting and Relational Behavior in Marketing Channels. *Journal of Marketing*, v.60, p.19-38.

MCFARLAND, R.G; BLOODGOOD, J.M.; PAYAN, J.M. (2008). Supply Chain Contagion. *Journal of Marketing*, v.72, p.63-79.

MEEHAN, J.; WRIGHT, G.H. (2011). Power Properties: a buyer-seller comparison of areas of influence. *Journal of Purchasing and Supply Management*, 17, p. 32-41.

SILVA, M. F. O.; COSTA, L. M. 2012 ). A indústria de defensivos agrícolas. *BNDES Setorial Química*, 35, 233-276.

STERN, L.W.; EL-ANSARY, A.I.; COUGHLAN, A.T.; (1996). *Marketing Channel*. 5<sup>th</sup> ed. Upper Saddle River: Prentice Hall, 576 p.