



Producers' Perception of Grain Delivery in a Cereal Company in Northern Rio Grande Do Sul, Brazil

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Agribusiness is constantly growing every year, all due to the increase in the world population, which makes the demand for food ever greater. Agriculture in Brazil is seen today with the greatest potential for expansion and growth compared to other countries, thus the market and the agricultural industries are expanding. The objective of this work is to help a cereal company in the north of the state of the Rio Grande do Sul through a field survey in verifying the customers' perception, and exploring the predominant factors in choosing the delivery of grain production. The purpose of the literature review was to clarify aspects regarding agribusiness and the area in which the research was carried out. Information collected in the literature review provided support for the construction of a questionnaire used in the data collection. Results showed explanation of the diversity of each region in which the company operated and with that, it was noted the different profiles of the producers, and consequently the competition, since each one had its peculiarities, and each client, regardless of region, had distinct needs that needed to be seen and met by the company in general. The company is in full growth, and has a very broad view of the market, that is, it is diversifying its areas of operation in the agribusiness branch in search of competitiveness, valuing customers and partners, always bearing in mind its principles and values, being this is a differential valued by its customers.

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1. INTRODUCTION

Agribusiness on a global level has been growing steadily every year, all due to the increase in the world population, which makes the demand for foodstuffs more and more. Agriculture in Brazil is seen today with the greatest potential for expansion and growth compared to other countries, thus the market and the agricultural industries are expanding.

Brazilian cereal companies are investing heavily in their infrastructures, because with each harvest production increases, and to remain in an extremely competitive market. They need to have a storage capacity, flow and differentiated service in order to obtain a competitive advantage in relation to the competition, however, with increasingly smaller margins.

Agribusiness has been growing considerably as previously mentioned, and this has led to the emergence of several opportunities for companies, forcing everyone in the industry to qualify and innovate daily so as not to lose space among several that are seeking to increase their participation in this market. As a result, listing all the factors that are relevant for companies to move forward, and achieve their goals, it is noted that one of the biggest differentials is customer satisfaction, as in a way everyone sells, sells inputs, and it is service is one of the key points to make the business happen.

Thus, for any company, it is essential to do research, and that analyzes how the organization can be inserted in the market, having a vision of the whole, either internally or externally. In order to assist the company C. Vaccaro e Cia Ltda this field survey with customers was conducted. This study explored the customers' perceptions, and the predominant factors in choosing the delivery of the grain production Through the identification of the company's needs, it was possible to define the general and specific objectives of this work. The general objective was to identify the predominant factors at the time of delivery of grain production. Specifically, to analyze the profiles of producers and the perceptions of the producers towards the company.

2. METHODOLOGY

The management of the quality of an organization's products and services implies the constant measurement of customer satisfaction with the performance of the offer. Theoretically,

satisfaction is the feeling resulting from an evaluation carried out by buyers after purchase and consumption. At this point, the consumer will experience confirmation or non-confirmation of their expectations. This means that when identifying a problem or a need, the consumer has more or less in mind the form of solution, in short, an "expected product" that bases the expectations placed on a given offer and, in this sense, the shopping experience and consumption can bring satisfaction or dissatisfaction as a consequence.

Therefore, customer satisfaction with the quality of a given offer can be measured by comparing the perception of what was provided with the expectations of what was desired (PARASURAMAN et al., 1985). The discrepancy that exists between the customer's expectations (importance) and perceptions (perceived quality) in relation to an experienced service is what allows managers to attribute to the quality of a given brand [1].

So, understanding consumer expectations is the central point for understanding satisfaction (VINAGRE, NEVES, 2008) [2]. In practice this means that the client must express states of satisfaction (and/or dissatisfaction) in relation to elements that he values in his relations with different organizations. As stated by Rossi and Slongo (1998, p. 111), "there is no point in measuring states of satisfaction and/or dissatisfaction in relation to elements for which customers are indifferent. To err in the definition of satisfaction indicators corresponds to err in the essence of the research" [3].

Research design is based on obtaining information through primary data collection. First, we sought to theoretically base the theme to be researched, and through a literature review. The purpose of the literature review was to clarify aspects regarding agribusiness and the area in which the research was carried out.

The information collected in the literature review provided support for the construction of a questionnaire used in the data collection. The questionnaire contained closed and open questions, which served as a basis for rural producers. These were distributed in 10 cereal companies located in Alto Uruguai Gaucho. Approach was direct quantitative where the degree of satisfaction of the producers was measured considering their expectations and the company's performance.

In the approach of direct quantitative research, a survey with a Likert scale (ranging from totally dissatisfied to totally satisfied) will be applied. Regarding the definition of the sampling, it will be defined observing the error of 5%, recommended in the literature for conclusive studies. The target population, from which the sample will be taken at random, were all producers who traded with the company. The collection procedure was carried out individually, in person and by telephone. After the collection, the analysis of the general frequency of the data was performed, as well as the use of some elements of descriptive statistics to validate crossings, through the Spearman correlation, made by the researchers, as well as to compare if there is significant statistical difference in the degree satisfaction of producers considering their region and also their size.

The research aimed to reach around 180 producers, at random. The variables analyzed were price, search for information by the producer, quality of service and satisfaction with the company in question.

3. RESULTS AND DISCUSSION

Formulation of the research questionnaire was developed in 4 question blocks, the first two with 4 questions each, and the last with 5, totaling 18 questions in all, and in all blocks a key question was created for each subject. In order to be more assertive, a space was added to the questionnaire for customers to write their suggestions, contributing to a more concrete result.

The present work counted with the participation of 158 producers distributed in the 10 units of the company and chosen at random, but not divided in quantity of equal questionnaires per unit, that is, it varied from 5 to 40 questionnaires in each region. Of the respondents, the age ranged from 18 to 78 years, and the largest range of respondents was between 48 and 58 years, representing 32.5% of the interviewees, with 1 of the producers not answering this question (Table 1). The younger ones are gaining ground in the countryside, as most of the interviewees have children, and they work in the countryside, aiming at rural activity as a company, and occupation is economically viable.

Only 1% of respondents have an area equal to or greater than 300 hectares (ha), that is, of all the customers who answered the questionnaires, the vast majority are small producers, representing 69% of respondents (Table 2). The deals to

happen vary a lot from the heat of the moment, and part of the company uses specific strategies to serve its niche market with attractive services and conditions to meet the needs of its customers.

As shown in Table 3, 74.4% of the interviewees have been negotiating with the company for 10 years, all because of the change from generation from father to son, since the company has been operating for over 60 years in the segment, while 3.2% of them works together with the company for 30 to 40 years, as shown in Table 3. In addition to the passing of generations, the company has been growing steadily, opening new units in some municipalities in the region, and this is also one of the reasons for the high rate of customers who do business with the company for less than or equal to 9 years.

From the data tabulated in Excel, 3 variables were used to analyze the results, being the average of each question and block, the standard deviation of each question and block, and the coefficient of variation of each question and block, where the results will be described results.

In block 1, relevance was obtained in question 3, which asked about agility in receiving grains (scale, hopper), where the average was 4.34, but in general all questions were with averages above 4. In contrast, the standard deviation of question 2 was 0.80 because some extremes were observed in the answers, as some properties are closer to the receiving unit and others are more distant. Table 4 shows the results of block 1.

The questions related to this block are extremely important for the company, since the harvests are being harvested at a shorter interval each year, and the tendency of queues at the units is a problem that needs to be treated with great caution, and because of the company invests in elevators and pre-cleaning in the biggest bottlenecks to avoid this type of inconvenience, and is being recognized by customers as a result of the research explained above.

Table 5 shows peculiarities in question 6, since the average and standard deviation were not coherent, because it asked about the deadline for receipt of grain sales, with an average of 3.89 and standard deviation 1, or that is, for many customers it is satisfied and totally satisfied, and for others it is totally dissatisfied and satisfied, consequently, lowering the average and increasing the standard deviation.

In the block on the strategies that the company adopts to be aggressive in relation to competition and the methods used to satisfy its customers, it was noted as previously mentioned in question Q6, where the market is extremely volatile, and the country has gone through difficult times in the year 2018, such as the truckers' strike, among other barriers that made the company out of schedule due to the strike, as the flow to the ports was not possible, managing to effect billing only after normality. On the other hand, one can analyze the rest of the questions he talks about regarding price, benefits, and conditions, where the company has an average above 4.1 and standard deviations with consistency, making this confusing in relation to the responses of the company question Q6.

Approach taken in block 3 was to understand what the customer takes into account in terms of service, and the result shows us that the relationship between company, employee, and customer is paramount for the success of companies. Table 6 shows that question 11 had the second highest average of 4.59, precisely the one that speaks of the professionalism of the employees, but all answers obtained averages above 4.4, with that, it is justified that matters related to attendance are extremely important in the organization, as shown in Table 6.

Combination of company and employees forms a chain, that is, one depends on the other to be sustainable, and research has shown this in the responses of customers, pointing out that this is what is making business happen when talking about proximity, because of In general, all companies sell inputs, receive cereals, however, people who are on the cutting edge with the customer, it is very likely that when making the decision, the first option will be that of the company.

It is noted that in block 4 (Table 7) the responses were practically unanimous when it came to reliability, and safety, and the company in question is well regarded in the perception of its customers, where both the average, the standard deviation, and the variation coefficient were marked out, that is, this means that customers are satisfied with the company, as explained in the table.

In this last block of research questions, it is possible to note the weight that the name and brand of the company can interfere in terms of the perception of customers, and this impacts on the moment of decision-making by-passing

tranquility and confidence in leaving your product in a third. The company as a whole, according to the result of the survey in its entire area of activity, is meeting expectations and is another important factor in addition to the aforementioned proximity. General scope of the survey, customers are satisfied with the products and services being offered by the company, knowing that the changes are very fast and one must be attentive to everything in order not to lose market.

Part of the questionnaire was emphasized on the customers' perception on whether they can recommend the company to a colleague or friend. Results obtained 100% of the respondents answered YES, which was positive feedback for the, The level of education of decision makers is an important variable, especially in rural areas. Managers with a higher level of education tend to access information from different sources more easily and base their decisions on solid criteria.

Spearman's rank correlation coefficient is a non-parametric correlation measure, it does not require the assumption that the relationship between variables is linear, nor does it require variables to be quantitative; can be used for variables measured at the ordinal level. When the selection of the elements that make up the sample is done at random, from a population, it is possible to determine whether the variables under study are associated, in the population. That is, it is possible to test the hypothesis that the two variables are associated in the population (LIRA, 2004) [4].

Table 8 shows some relevance in all blocks, and in block 1 in question Q3 it shows that customers who have been working with the company for a long time appreciate the speed of unloading and evaluate this procedure in a negative way, pointing out that more negotiation time worse was the perception of the producers.

In block 2, peculiarities were obtained in the age of the interviewees and in the negotiation time, where in question Q6 there is significant relevance in the sense of the inverse term of receipt of cereals, and 10% in question Q5, signaling that the company is paying however, customers who have grain in storage, however, producers are negatively evaluating these requirements. In this block it can be noted that some are dissatisfied with the deadline for receipt, but on the other hand are satisfied with

the value of the quotation of the cereals, with differences in responses.

In block 3, in question Q9, which refers to technical assistance, it indicates that it is insignificant in producers with a larger cultivated area, often because they have outsourced people to provide assistance. This result exposes the situation that the larger the property area, the better the score for this item has been.

And in block 4 you can see that they have a relationship with respect to trust and guarantee in customers who have been working with the company for a long time. It appears that the longer the negotiation time with the company is, the better is the issue of safety and reliability that the producers perceive of the company, emphasizing that the confidence of the producers in the company has a direct and positive relationship with the negotiation time.

Table 1. Age of respondents

Age range	Absolute Frequency	Relative Frequency
18 --- 28	19	12,1%
28 --- 38	36	22,9%
38 --- 48	32	20,4%
48 --- 58	51	32,5%
58 --- 68	14	8,9%
68 --- 78	5	3,2%
Total	157	100,0%

Source: Elaborated by the Author

Table 2. Range of hectares per producer

Size range	Absolute Frequency	Relative Frequency
1 ---49	108	69%
50 ---99	25	16%
100 ---199	15	10%
200 ---299	7	4%
300 ---400	1	1%
Total	156	100%

Source: Elaborated by the Author

Table 3. Time of deal with the company (Years)

Trading time	Absolute Frequency	Relative Frequency
0 --- 9	116	74,4%
10 --- 19	16	10,3%
20 ---30	19	12,2%
30 ---40	5	3,2%
Total	156	100,0%

Source: Elaborated by the Author

Table 4. Degree of satisfaction in production delivery

Block 1	Average	Deviation Standard	CV
Grain storage capacity (Q1)	4,21	0,74	0,18
Distance between the property and the receiving unit (Q2)	4,18	0,80	0,19
Agility in receiving grains (scale, hopper) (Q3)	4,34	0,72	0,17
Cost-benefit ratio between property X unit (Q4)	4,13	0,73	0,18

Source: Elaborated by the Author

Table 5. Satisfaction with the grain price policy

Block 2	Average	Deviation Standard	CV
Price offered in grain sales (Q5)	4,20	0,74	0,18
Deadline for receipt of grain sales (Q6)	3,89	1,00	0,26
Benefits offered during grain sales (Q7)	4,18	0,69	0,16
Trading conditions (Q8)	4,30	0,65	0,15

Source: Elaborated by the Author

Table 6. Satisfaction in the delivery of grains

Block 3	Average	Deviation Standard	CV
Technical assistance from professionals in the field (Q9)	4,47	0,67	0,15
Company relationship with the customer (Q10)	4,56	0,51	0,11
Employee professionalism (Q11)	4,59	0,52	0,11
Confidence in past information on grain sales (Q12)	4,47	0,59	0,13
Quality of customer service (Q13)	4,63	0,51	0,11

Source: Elaborated by the Author

Table 7. Satisfaction in reliability and safety

Block 4	Average	Deviation Standard	CV
Trust in the brand C. Vaccaro e Cia Ltda (Q14)	4,53	0,53	0,12
Security offered by the brand C. Vaccaro e Cia Ltda (Q15)	4,46	0,54	0,12
Solid company by time to market (Q16)	4,49	0,51	0,11
Guarantee of receipt of grain sales (Q17)	4,56	0,56	0,12
Confidence in information regarding grain sales (Q18)	4,52	0,55	0,12

Source: Elaborated by the Author

Table 8. Spearman's correlation matrix

	Variables	Age (years)	Cultivated area (ha)	Trading time (years)
Block 1	Q1	0.0352 ^{ns}	0.0617 ^{ns}	0.0162 ^{ns}
	Q2	0.0022 ^{ns}	0.0455 ^{ns}	0.0854 ^{ns}
	Q3	-0.0537 ^{ns}	0.1046 ^{ns}	-0.1815 ^{**}
	Q4	-0.1107 ^{ns}	0.0543 ^{ns}	-0.0090 ^{ns}
Block 2	Q5	-0.0790 ^{ns}	-0.0733 ^{ns}	-0.2529 ^{***}
	Q6	-0.2434 ^{***}	-0.0523 ^{ns}	-0.1871 ^{**}
	Q7	-0.0038 ^{ns}	-0.0107 ^{ns}	-0.0709 ^{ns}
	Q8	-0.1103 ^{ns}	-0.0038 ^{ns}	-0.0394 ^{ns}
Block 3	Q9	-0.0968 ^{ns}	0.1531 [*]	-0.0027 ^{ns}
	Q10	-0.0827 ^{ns}	0.0104 ^{ns}	0.0459 ^{ns}
	Q11	-0.0671 ^{ns}	-0.0178 ^{ns}	-0.1029 ^{ns}
	Q12	-0.0043 ^{ns}	-0.0396 ^{ns}	0.0306 ^{ns}
	Q13	-0.0070 ^{ns}	0.0704 ^{ns}	0.1242 ^{ns}
Block 4	Q14	-0.1267 ^{ns}	-0.0739 ^{ns}	0.0289 ^{ns}
	Q15	-0.0148 ^{ns}	-0.1174 ^{ns}	0.0271 ^{ns}
	Q16	-0.0713 ^{ns}	-0.1150 ^{ns}	-0.0077 ^{ns}
	Q17	0.0038 ^{ns}	0.0307 ^{ns}	0.2409 ^{***}
	Q18	-0.0287 ^{ns}	0.0696 ^{ns}	0.1899 ^{**}

Source: Elaborated by the Author; * Significant at 10%; ** Significant at 5%; *** Significant at 1%; ns Not significant

4. CONCLUSION

According to the aggregated knowledge, it is possible to perceive the daily challenges that companies face in their daily lives, and how flexible the new realities need to be, adaptable to new paradigms, under the risk of becoming an obsolete and ineffective instrument.

Entrepreneurship is always a risk, but entrepreneurship without planning is something that can be avoided. The developed research will show and assist managers in making decisions, with results that start from the feeling of their

customers, being able to assess the company's situation and prevent possible problems.

It is concluded that the company C. Vaccaro e Cia Ltda, object of study of this research, highly values its culture and always seeks to offer its customers quality products and services, continuously investing to improve its structure and its collaborators always trying to be a reference for its customers, partners and collaborators.

In view of the results obtained, research is an important tool for strategic use in organizations,

because from it, it is possible to obtain a series of results that can become paramount in times of crisis. What was developed in the present work is only one step of what can be done through research, being able to go deeply into each unit for example.

The results showed us an explanation of the diversities of each region in which the company operates, and with that, it can be noted how different the profile of the producers is, and consequently the competition, since each one has its peculiarities, and each independent customer region has different needs that need to be seen and met by the company in general.

The company C. Vaccaro e Cia Ltda is in full growth, and has a very broad view of the market, that is, it is diversifying its areas of operation in the agribusiness branch to become more and more competitive, valuing customers and partners, taking into account always bear in mind its principles and values, which is a great differential valued by its customers.

DISCLAIMER

The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

CONSENT

Producers were chosen at random and were instructed to answer the questionnaire anonymously after their consent.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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