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PPGSPA
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EM SISTEMAS E PROCESSOS AGROINDUSTRIAIS

AGROINDUSTRIAL INTELLIGENCE CENTER

Technical Report:

Risks Associated with the Selection of Suppliers for Rapadura Agroindustries in Santo Antonio da Patrulha - RS

Case Study of the Municipality of Santo Antônio da Patrulha - RS

Ref.: Analysis based on the master's dissertation by Sacha Killes Cachoeira Rodrigues (PPGSPA/FURG, 2023).
Link to the dissertation: https://argo.furg.br/?BDTD13896 Link
to the English/Portuguese version of the report

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1. Executive Summary

This report summarizes the results of the analysis on the risks in the selection of suppliers of rapadura agro-industries in the municipality of Santo Antônio da Patrulha in Rio Grande do Sul using the Multicriteria Optimization Method based on Proportion Analysis (MOORA).

It was found that the most important criteria in supplier selection were punctuality in delivery and quality. For peanuts (raw material), the most important criteria were quality and compliance with specifications and legislation. For all raw materials, a concern was observed regarding availability and receipt. For

When it comes to packaging, the prioritized criteria were quality and speed of purchase. Price did not appear as a prominent factor in any category. By identifying the risks associated with supplier selection, actions can be taken to ensure these risks do not affect, or affect to a lesser extent, the performance and competitiveness of rapadura agribusinesses.

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Risks Associated with Selection Suppliers of Agroindustries of Rapaduras in Santo Antônio da Patrulha – RS

The sweets and rapadura agroindustry sector is among the main economic activities of Santo Antônio da Patrulha, Rio Grande do Sul. It is part not only of a production chain, but of an entire system, forming a market structure that must be understood and analyzed for growth. The municipality has 23 sweets and rapadura agroindustries, boosting this important sector, with products consumed throughout the state, Brazil, and beyond.

01 It is important to highlight the main risks facing the supply chain of the rapadura agroindustry and how to select suppliers to avoid unexpected events.

02 When selecting in a manner assertive supplier, the company will have a reduction in acquisition costs, improved quality and more lasting relationships.

03 Multicriteria decision techniques are used to select and evaluate whether supplier performance contributes to the company's strategic supply chain vision.

Methodology

An exploratory research was carried out, with a qualitative approach, using bibliographic research, data collection through structured interviews and applied research.

1. Research characterization: Exploratory involving a literature review in the *Scopus* and *Web of Science* databases by searching for scientific articles and books.

2. Description of the scenario: 5 of the 23 rapadura agro-industries in Santo Antônio da Patrulha were selected, as they were medium-sized companies.

3. Definition of the criteria used: The criteria cited by Mendes (2013) were used, where 16 general criteria were selected, 13 for raw materials and 14 for packaging.

4. Tools used: a structured questionnaire administered via *Google Forms* for data collection. Of the five companies selected, four responded to the questionnaire. The respondents were managers of these agribusinesses.

5. Method used: MOORA multicriteria method.

Criteria in general scope (16 criteria analyzed)

• **On-time delivery** and **quality** are the most important criteria when making a purchasing decision, as the risks associated with these criteria can directly affect production. • **Brand** and **payment flexibility** are the least important aspects.

Raw material criteria – Peanuts (13 criteria analyzed)

• **Quality** and **Compliance with specifications and legislation** were the criteria with the greatest influence.
• **Expectation of continuity, Availability of supply** and **Frequency of deliveries** appear, respectively, in third, fourth and fifth place.

Raw material criteria - Sugar (13 criteria analyzed)

• **Quality** and **Compliance with specifications and legislation** were the highlighted criteria, as well as peanuts.
• **Freight** and **Technological Capacity** were the least important criteria.

Raw material criteria - Glucose (13 criteria analyzed)

• **Delivery frequency** and **supply availability** were the most important criteria.
• **Quality** appeared in third place.

Raw material criteria - Molasses (13 criteria analyzed)

• **Quality** and **Standard** were the criteria with the greatest influence.

Packaging criteria (14 criteria analyzed)

• **Speed of creation** and **Condition of the product if faithful to the promise** were considered the most important criteria.
• **Quality** occupies third place, indicating that this criterion is always among the priorities of the agro-industries studied.

Conclusion:

It became clear that among the most important criteria, the quality of raw materials and inputs is one of the main factors to be considered. However, it is necessary to evaluate a set of multiple criteria, avoiding decisions based solely on price or intuitive judgment, and taking into account the perspectives of representatives from different sectors of the agribusiness.