RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

Year V, v.1 2025. | submission: 02/08/2025 | accepted: 04/08/2025 | publication: 06/08/2025

Pandemic: impacts, challenges and opportunities in the agricultural inputs distribution chain in Mato Grosso

Pandemic: impacts, challenges and opportunities in the agricultural inputs distribution chain in Mato Grosso

Mateus Mendes Batista Coelho – Agricultural Engineer UFV and Specialist in Agribusiness USP/ESALQ

SUMMARY

Agribusiness is the main pillar of the Brazilian economy, and the agricultural input distribution chain is crucial to its continued existence. The emergence of the pandemic has had significant impacts on global economies, but Brazilian agribusiness has remained strong and growing. Therefore, this study aimed to gather information from professionals working in the agricultural input distribution sector in the state of Mato Grosso about the impacts of COVID-19 on the sector and share this information to mitigate these impacts. Despite the significant challenges facing the pursuit of technology, innovation, and customer-distributor relationships, it was observed that professionals are confident in the sector's growth, even during difficult times.

Keywords: Pandemic; distribution of supplies; research; questionnaire

ABSTRACT

Agribusiness is the main pillar of the Brazilian economy, and the agricultural input distribution chain is extremely important for its continued existence. The emergence of the pandemic has had significant impacts on global economies, but Brazilian agribusiness has remained strong and growing. Therefore, this study aimed to collect information from professionals working in the agricultural input distribution sector in the state of Mato Grosso about the impacts of COVID-19 on the sector and share this information to mitigate these impacts. Despite the significant challenges facing the pursuit of technology, innovation, and customer-distributor relationships, it was observed that professionals are confident in the sector's growth, even during difficult times.

Keywords: Pandemic; input distribution; surveys; questionnaire

1. INTRODUCTION

In 2019 the world experienced moments of great political, social and economic. The trade war between China and the United States has caused the Chinese seek alternatives in the Brazilian market, thus pointing to positive results of the Brazilian economy, especially agribusiness, which needed to become more flexible and strengthen its operations to meet market demand.

In the transition from 2019 to 2020, the Covid-19 pandemic emerged, causing major impacts on global Gross Domestic Product [GDP] and left cyclical marks on economies of developing countries. According to the Brazilian Institute of Geography and Statistics [IBGE], Brazilian GDP fell by 4.1% in 2020, the biggest contraction since 1990 (IBGE, 2021). Even in this scenario, Brazilian agribusiness showed its strength and continued producing, exporting and maintaining food supply chains in operation. According to data from the Center for Advanced Studies in Applied Economics [CEPEA] agribusiness accumulated almost 2 trillion reais in 2020, representing 26.6% of the Brazilian GDP. While other sectors of the economy felt the impact of the pandemic, agribusiness increased growth by 24.31% in 2020 compared to 2019 (CEPEA, 2021). The sector presented a surplus of US$45.4 billion in the first six months of 2020, while the remaining sectors accumulated a deficit of US$23.1 billion. Sectors such as industry and services had declines of 3.5% and 4.5% in GDP, respectively. Even Agroindustry, a segment of agribusiness most affected by the pandemic, saw an increase of 8.72% in the accumulated January to December 2020. Part of this growth is due to the good performance of the channels of distribution of inputs that expanded by 2.4%, in addition to the services sector that expanded by 6% (CEPEA, 2020).

Brazil has more than 6 thousand distributors (resellers and cooperatives) operating in a market that generated around R$46.8 billion in sales of inputs in 2018, 54% of this revenue was represented by inputs used in the production of grains and cereals. The distribution market serves 3.6 million rural properties in Brazil, which corresponds to 48% of all properties in the country (ANDAV, 2019). The state's resales of Mato Grosso sell around 50% of the inputs to rural producers and in some cases act as financing agents for agricultural production. In a survey conducted by Mato Grosso State Council of Agricultural Product Resale Associations [CEARPA], it was found that 85 stores originate volumes of 25 million bags of soybeans and 32 million bags of corn. In the state alone, this market generated R$11.1 billion between seeds, pesticides and fertilizers in 2017 (CEARPA, 2017). In addition, the distributors are an important channel for disseminating knowledge. Sandhusen (1998)

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

defines distribution channels as individuals and organizations, called intermediaries, of which are used to transport products from the producer to the consumer. professionals from the state's dealerships make more than 50,000 visits to farmers per harvest and approximately 500 events per year, including technical meetings and field days (CEARPA, 2017).

With the advancement in the services sector and the change in the business model of distributors accelerated by the Covid-19 pandemic, rural producers have sought solutions that combine technology and profitability to achieve good results productivity in their crops. Therefore, resale has become an excellent option to farmers looking to add value to their businesses.

Thus, the objective of this work was to verify, through the application of a questionnaire, the opinion of professionals who work in resale in the state of Mato Grosso regarding the impacts of Covid-19 on the production chain, and through this, share information and measures in order to mitigate these impacts on the agricultural input distribution sector.

2. MATERIAL AND METHODS

The work was developed through the application of a questionnaire to active professionals in the distribution of inputs in the state of Mato Grosso, in different areas (commercial, administrative/supply, credit/collection, HR and executive). The research was conducted through the application of an "online" questionnaire, prepared on the Google® Forms platform, with the voluntary participation of 46 unidentified interviewees. They were 15 objective and subjective questions were prepared, which were made available for receipt of responses between January 5th and January 20th, 2021. The questions asked were based on whether in surveys and work related to the challenges and opportunities of the sector, models business, people management, competition, technology and marketplace. The data obtained were analyzed through descriptive statistics. The complete questionnaire can be found in the Appendix THE.

The sample selection criterion was based on the objective of the work and the specificity of the questions, since the questionnaire was applied only to professionals working in companies in the agricultural input distribution sector.

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

The questionnaire disregarded information regarding gender, age group and class. social, taking into account only professionals working in the market in the state of Mato Grosso, with caution in covering the largest number of people, thus allowing for broad representativeness and plurality of opinion on the subject in question.

Initially, the questions were designed with the aim of identifying which sector of the company the interviewees work in, distributed between: commercial, administrative/supply, credit/collection, human resources or executive, and how long they have been working in the agricultural input distribution market. Subsequently, questions were asked about investment of foreign capital in companies, participation in virtual meetings, sales of online inputs, mergers/acquisitions, adoption of new customer-facing platforms, market expectations and the impacts, challenges and opportunities of the pandemic for the sector.

3. RESULTS AND DISCUSSION

Brazil is, without a doubt, one of the biggest players in global agribusiness, and consequently one of the largest markets for agricultural inputs in the world. Thus, we know the importance of resellers in this market, which represents the bridge with the industry for that the inputs reach the rural producer. With the emergence of the pandemic, resellers needed to adapt to market demands, seeking innovations, investing in technology and remodeling its business and management structures.

Based on this conception, the data from this public opinion survey become of great relevance for distribution channels, being a fundamental “input” in the strategy of managers in a post-pandemic period.

Professional occupation and experience in the input distribution market agricultural

First, participants were asked about the sector in which they work in the company. Of the total number of respondents, 71.7% perform a role in the sector commercial (Figure 1). It is known that the employees who occupy these positions are the ones who generate revenues for companies, acting on the front line through sales to rural producers. These data corroborate those found by Sinha and Zoltners (2001) in which, approximately, 12% of employed people in the world work in sales roles, in addition to reaching receive 1 to 40% of a company's sales in terms of investments. The rest interviewees are in the following sectors: administrative/supply (19.6%), credit/collection (4.3%), human resources (2.2%) and executive (2.2%).

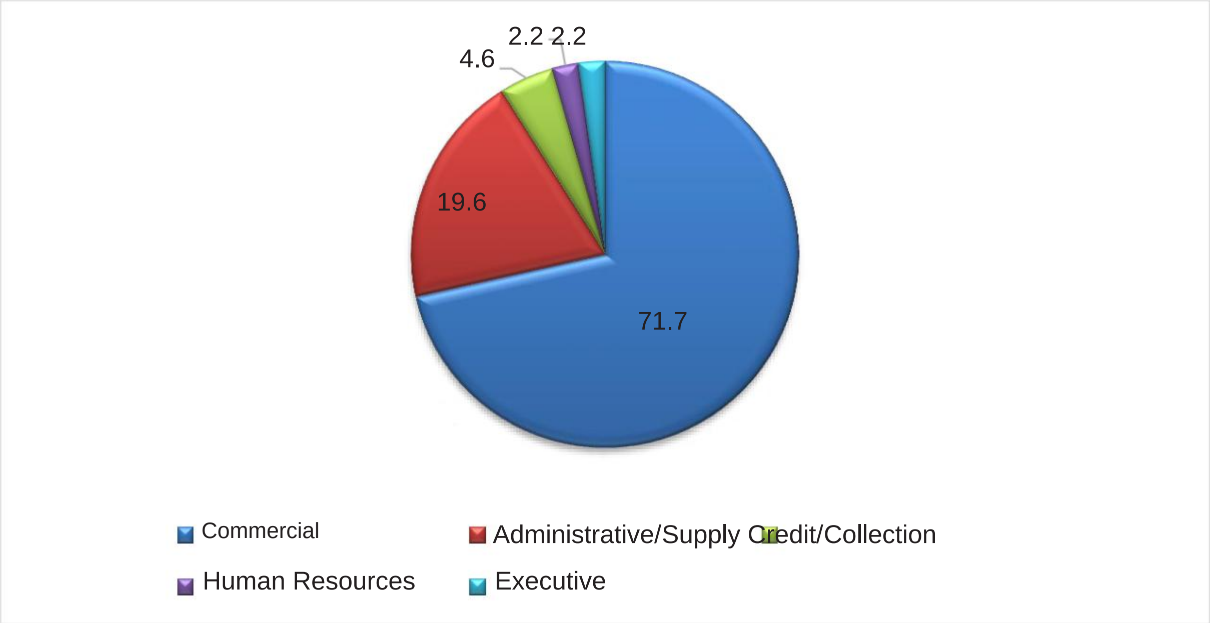

Figure 1. Company's sector of activity, percentages. Representation based on responses to the question: In which sector do you currently hold a position?
Source: Original research results

Regarding the time spent in the market, 19.6% of respondents have been there for more than 10 years. years working in the sector, 17.4% between 5 and 10 years, 43.5% between 2 and 5 years and 19.6% for less 2 years (Figure 2). Most companies classify a professional's career as: intern, junior, full, senior, master, and specialist. This classification is generally based on time of experience within the company (Pozzebom, 2011). Therefore, it was found that more than half of the interviewees fit into the junior position (up to 5 years of experience), which reveals a possible turnover and opening of new opportunities in companies.

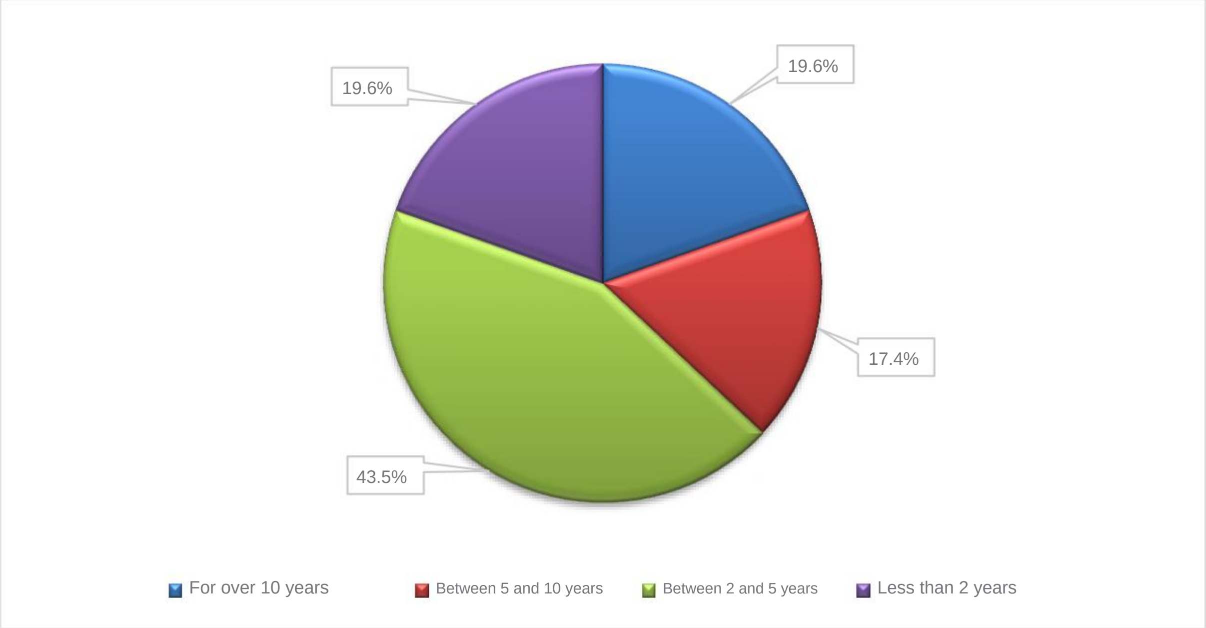

Figure 2. Length of time in the market, percentages. Representation based on responses to the question: How long have you been operating in the agricultural input distribution market?

Source: Original research results

Mergers/acquisitions and foreign capital investments in resales

The injection of foreign capital into distribution channels in Brazil has become a common practice for almost a decade. Of the total respondents, 80% work in companies who have some type of foreign capital investment (Figure 3), and 71.7% believe that this is an advantageous strategy for the agricultural inputs distribution market (Figure 4). In 2012, the Japanese company Sumitomo acquired control of Agro Amazonia in Mato Grosso. Grosso; and in 2015, the Indian crop protection industry UPL acquired 40% of the rights of Sinagro, operating in the Central-West, Southeast, North and Northeast regions of the country (Salomão, 2017). In 2016, the Chinese company Dakang bought a 57% stake in Fiagril (Mato Grosso) and a a year later acquired 53.99% of Belagrícola, from Paraná; the Pátria Investimentos fund acquired majority stake of Impacto, from Mato Grosso, and the Pitangueiras Group, from Paraná. The Aqua Capital Fund invested in distributors Rural Brasil and Agro 100 (Navarro e Lopes, 2019).

The main objective of these actions is to optimize business, whether in increasing

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

portfolio, having more robustness, compactness of the organizational structure, breadth of performance and, consequently, increased work efficiency. In 2016 and 2017, the large economic groups that dominate the seed and pesticide markets engaged in mergers and acquisitions, further increasing concentration of these markets. The group of the so-called "big six" (Monsanto, Bayer, Syngenta, Basf, Dow and DuPont) was restricted to four: Bayer, Basf, Syngenta and Corteva (CADE, 2020). The scenario for distributors is concentrated, less shelf exclusivity, greater complexity in inventory management, professionalization, succession, new international entrants and business diversification with precision agriculture services, consulting and other forms of value addition (Antolini, 2018).

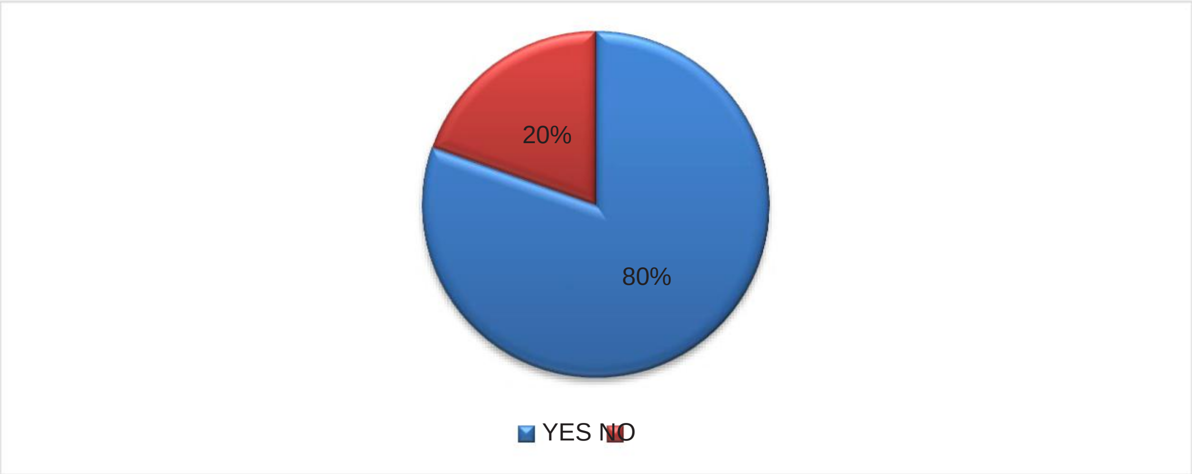

Figure 3. Foreign capital investment, percentages. Representation based on responses to the question: Does the company you work for have any foreign capital investment?

Source: Original research results.

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

Figure 4. Advantages of mergers/acquisitions, percentages. Representation based on responses to the question: Do you believe that mergers/acquisitions of resellers by large foreign groups are advantageous strategies for the input distribution market? Source: Original survey results

The internalization of technology and the marketplace in the development of the new methodology of work and cost restructuring in companies

With the emergence of the pandemic, companies needed to adapt to a new model work, following social distancing rules and safety protocols determined by public health agencies. In this way, these companies found in the virtual meetings are a resource for establishing communication, whether with your employees, customers or suppliers. According to Nakane (2000), the meeting is characterized by the meeting between two or more people for the purpose of presenting, debating and discussing topics related to chosen central theme. Meetings are fundamental tools for bringing about change and achieving solutions in organizations (Cibotto, 2010). Regarding the number of meetings, 78.26% of respondents said they only attended one virtual meeting per week before the emergence of the pandemic. After the emergence of the pandemic, 60% participated between two and four weekly meetings and 30% more than five weekly meetings. The remainder (10%) said participate in just one weekly meeting after the pandemic emerged.

On a scale of 1 to 10, with 1 being not at all useful and 10 being completely useful, regarding meeting productivity, 58.7% of participants gave a score above 6 and the

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

remainder between 1 and 5. In other words, more than half of the participants consider that this type of meeting is valid. In a survey conducted by Anmbima (2020), 62% of members said they preferred the online format, as these virtual meetings are more productive and allow for better use of time.

Participants were asked how much the pandemic affected their relationship company with customers and suppliers; 69.6% said the pandemic affected it a little or not at all the relationship with customers, without significantly impacting the relationship and the bond commercial with consumers and 76% was the percentage reported by respondents in relationship with suppliers, demonstrating that even in the face of the pandemic the mutual relationship continued to flow in a still beneficial way; and finally, only 2.17% said that the pandemic greatly affected the relationship with both. Given this data, it is possible to infer that the repercussion The continued good relationship was contributed to by the accelerated use of platforms digital and social media, such as “Whatsapp”, “Facebook”, “LinkedIn” and etc., which optimized over time, facilitated the communication interface and helped in problem-solving defendants.

Due to the practicality of access and the immediate viability of interaction between members of the agricultural input chain, 70% of respondents stated that after the emergence of the pandemic, the companies they work for joined some platform aimed at to customer service. The industry-distributor or distributor-producer relationship also evolved, due to the greater interdependence between the parties and the amount of data and available information. Advances and potential business in this area will create a new type relationship between companies and businesses, more effective, based on data, with strong results orientation and “profit-share” (Cônsoli, 2020).

Regarding the cost structure, among the five sectors mentioned in the research, Most participants responded that they were reasonably or not at all affected. The credit and collection sector stands out, with 89% between not at all and reasonably affected, and the technology area, 87% between not at all and reasonably affected (Figure 5). The commercial sector was cited as most affected, with 20% of respondents responding that they were affected and 6% greatly affected. This data can be explained by the change in the remuneration models of teams, which is the largest component of dealership operating costs. Companies are ceasing to pay the consultant only for the volume of sales or revenue and migrating for models based on indicators. Cônsoli (2020) highlights that the generating base of remuneration must be variable based on the result (margin) and accelerators such as deadline, default, visits and demand generation can also complement these indicators.

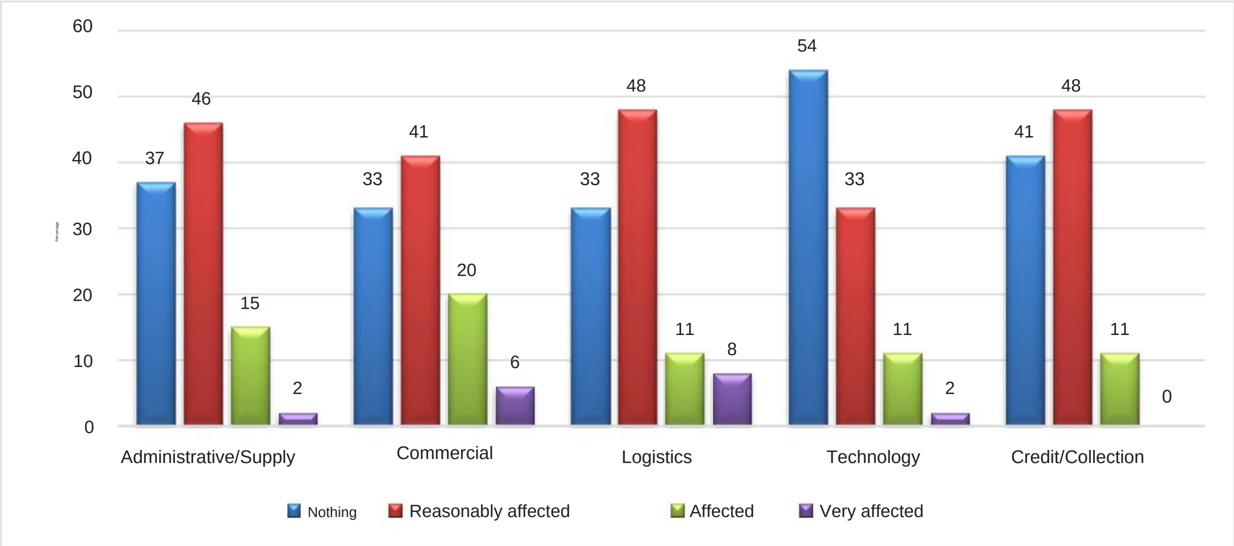

Figure 5. Effects of the pandemic on the company's cost structure, figures in percentage. Representation based on responses to the question: With the emergence of the pandemic, companies sought to adapt to the new reality by reviewing their cost structures. In your company, how much were these sectors affected?
Source: Original research results

Survey participants were asked about the sale of supplies online, 37% believe that this type of sale can boost sales in the country (Figure 6).

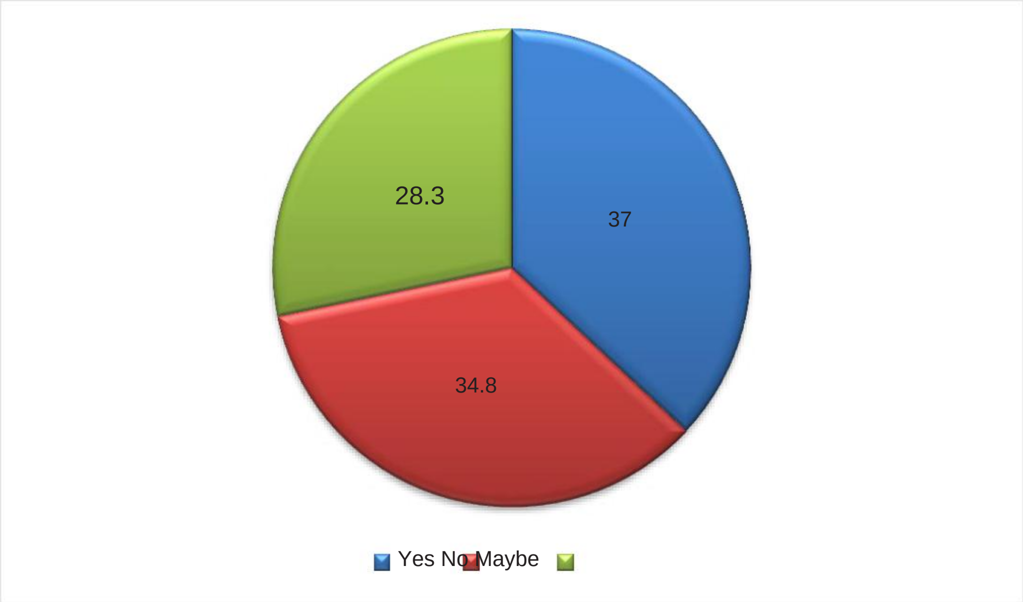

Figure 6. Online sales of supplies, percentages. Representation based on responses to the question: Do you believe that online sales of supplies could increase with the advent of Covid-19?

Source: Original research results

Online sales of supplies in Brazil are still slow. However, with the arrival of the new generation of younger producers this digitalization process tends to accelerate, as they have greater dominance over digital platforms. In 2019, Bayer launched the Orbia marketplace, a platform for buying and selling products aimed at agribusiness. Producers can purchase inputs, earn points, and exchange them for services. a survey conducted by Andav (2020), 57% of distributors responded that they intend to advance in online sales and another 11% already have some type of online purchase.

The development of these online tools will likely be gradual, with distributors using the platforms to quote orders, but with the transaction carried out in the traditional model, by the channel sellers themselves. The producer will use a lot the online environment to quote and select products, but you will still buy a lot of things at the reseller in the traditional model (Cônsoli and Meirelles, 2019).

Prospects and expansion of the agricultural inputs distribution market; challenges and opportunities

Regarding market expectations, 46% of respondents believe in a high

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

growth of the input distribution market in the state of Mato Grosso in 2021, 28% in medium growth and only 2% believe in a market reduction (Figure 7).

In a survey carried out by Andav (2019), 70% of the entrepreneurs interviewed deposited positive expectations regarding market growth, with 49% of the interviewees stated expectations of market growth.

Among the main factors that prevented market expansion, competition and margin/price were cited by 49% and 41% of respondents, respectively, followed by: management (37%), training (30%), climatic conditions (22%) and illegal market (4%). Except in the South region, in all other regions, competition or credit are the difficulties highlighted by 87% of distributors, then margin/price are cited by 27% of them (Andav, 2019).

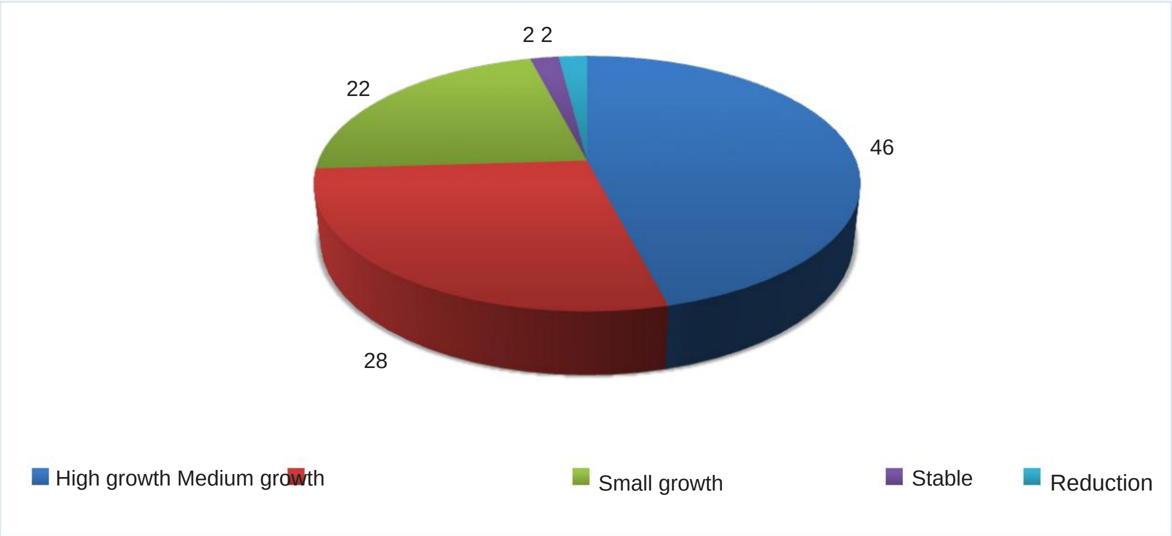

Figure 7. Market expectations, percentages. Representation based on responses to the question: What are your expectations regarding the input distribution market in Mato Grosso for 2021?

Source: Original research results

Respondents were asked subjectively about the impacts of Covid-19 in the distribution chain, in addition to the sector's challenges and opportunities for the future. Most reported that during the pandemic, relationships with customers became more difficult, the commercial area felt more affected by restricting direct contact with the producer rural, suspending visits to properties and consequently affecting negotiations. For on the other hand, consultants who already had a good previous relationship with clients left ahead and managed to close deals. Logistics, in terms of product delivery (seeds, pesticides and fertilizers) by suppliers was another negative point addressed by the interviewees, given the lack of raw materials and labor in the industry. Of the total respondents, 12% said that the pandemic did not affect the supply chain distribution of inputs. This fact can be explained by Cônsoli (2020), since crises make with which people and companies adjust to new realities, and in the input market companies have moved quickly in terms of reviewing processes, eliminating redundancies, adjustments to structures and operational models. Mattei (2020) highlights that the agribusiness competitiveness thrives independently of governments and even in the scenario of pandemic is expected to remain an important catalyst for the Brazilian economy.

Among the main challenges for the coming years, dealing with the strengthening of competition and providing quality customer service were the most cited points by the interviewees. For Queiroz (2008), meeting customer expectations with a exemplary service provision is as important as the product itself, this implies an action of commitment from the moment the order is placed to the delivery of the product. Companies that offer strategic solutions focused on farmers' difficulties and have various partnerships with different companies have a strategic advantage over the competitors and can build an ecosystem around their solutions (Markestrat, 2020). Regarding opportunities for the sector, interviewees cited investments in technology and innovation as one of the main items to leverage development of the chain. According to research published by Andav (2020), the main services linked to technology that has been offered are: satellite images, soil fertility maps, services using drones and variable-rate fertilization. This way, the transformation digital has an important role in the development of the input supply chain, being strategic for agribusiness, reducing costs and allowing greater efficiency in information sharing.

4. CONCLUSION

In view of the mergers and acquisitions of resellers by groups of investors and companies multinationals, it is notable that the market has become increasingly competitive. In this way

RCMOS – Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

the scenario for agricultural input distributors is challenging and will demand greater professionalization of the sector. Despite this, it was observed through this public opinion survey that there is confidence in the expansion of the sector, through the aggregation of value, whether in products or in services, through the implementation of new digital technologies, in the training of teams, in the agility of processes and mainly in strengthening the relationship between distributor and customer.

5. REFERENCES

Antolini, L. 2018. Impacts of manufacturers' mergers and acquisitions on the distribution of inputs node Brazil. Available in: <https://www.agrodistribuidor.com.br/publicacao.php?id_item=510#>. Accessed on: May 2, 2021.

Brazilian Association of Financial and Capital Market Entities [ANMBIMA]. 2020. Survey with associates indicates preference for virtual meetings. Available at: < https://www.anbima.com.br/pt_br/noticias/pesquisa-com-associados-aponta-preferencia-por-reunioes-virtuais.htm >. Accessed on: May 18, 2021.

National Association of Distributors of Agricultural and Veterinary Inputs [ANDAV]. 2019. 4th National Distribution Survey. Available at: <www.andav.com.br>. Accessed on: January 31, 2021.

National Association of Distributors of Agricultural and Veterinary Supplies [ANDAV]. 2020. 5th National Distribution Survey. Available at: <www.andav.com.br>. Accessed on: April 30, 2021

State Council of Agricultural Product Reseller Associations [CEARPA]. 2017. CEARPA Presentation. http:// Available in: < cearpamt.com.br/repositorio/pdf/apresentacao-cearpa.pdf>. Accessed on: April 3, 2021

Center for Advanced Studies in Applied Economics [CEPEA]. 2020. Brazilian Agribusiness GDP. Available at: <https://www.cepea.esalq.usp.br/br/pib-do-agronegocio-brasileiro.aspx>. Accessed on: October 20, 2020.

Center for Advanced Studies in Applied Economics [CEPEA]. 2021. Agribusiness GDP reaches 26.6% share of Brazilian GDP in 2020. Available at: <https://www.cepea.esalq.usp.br/upload/kceditor/files/Cepea_CNA_relatorio_2020.pdf>.

Accessed on: April 4, 2021.

Cibotto, RAG 2010. The importance of planning virtual meetings for distributed software development. In: V Meeting on Scientific and Technological Production, 2010, Campo Mourão, PR, Brazil.

Administrative Council for Economic Defense [CADE]. 2020. Agricultural inputs market.
Available at: <https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/cadernos-do-cade/mercado-de-insumos-agricolas-2020.pdf>. Accessed on: May 3, 2021

Cônsoli, MA; Meirelles, F. 2019. Digital transformation and online sales in the distribution of inputs Status perspectives 1). <https://www.markestrat.com.br/transformacao-digital-e-vendas-online-na-distribuicao-de-insumos- (Part Available in: status-e-perspectivas-parte-1/>. Accessed on: May 15, 2021.

Cônsoli, MA 2020. New times, new agro-distributor – Part 3: Servitization and transformation Available <https://www.agrodistribuidor.com.br/publicacao.php?id_item=546>. digital in: Accessed on: May 3, 2021.

Cônsoli, MA 2020. New times, new agrodistributor – Part 4: Review of the cost structure. Available at: <http://www.agrodistribuidor.com.br/publicacao.php?id_item=547>.
Accessed on: May 8, 2021.

Brazilian Institute of Geography and Statistics [IBGE]. 2021. Indicators panel. GDP variation. Available at: <https://www.ibge.gov.br/indicadores#variacao-do-pib> Available at: < https://www.ibge.gov.br/indicadores#variacao-do-pib>. Accessed on: April 13, 2021.

Markestrat. 2020. Digital Transformation in Agribusiness: Challenges and Opportunities within the Value Chain. Available at: <https://www.markestrat.com.br/digital-transformation-in-agribusiness-challenges-and-opportunities-within-the-value-chain/>.
Accessed on: May 11, 2021.

RCMOS - Multidisciplinary Scientific Journal of Knowledge.
ISSN: 2675-9128. São Paulo-SP.

Mattei, L. Brazilian economic policy in the face of Covid-19. 2020. Applied Social Sciences Notebooks. UESB, Vitória da Conquista/BA, year XVII, 30:172-83.

Nakane, A. 2000. Event organization techniques. Infobook, Rio de Janeiro, RJ, Brazil.

Navarro, K; Lopes, Fernando. 2019. Competition in input sales increases. Available in: <https://valor.globo.com/agronegocios/noticia/2019/06/26/aumenta-a-concorrencianas-vendas-de-insumos.ghtml>. Accessed on: May 6, 2021.

Pozzebom, R. 2011. What are the differences between junior, full, senior, master and specialist positions? Available in: < https://www.oficinadanet.com.br/artigo/carreira/qual_a_diferenca_entre_cargo_junior_pleno_senior_master_e_especialista>. Accessed on: May 1, 2021.

Queiroz, MA 2008. Commercial Management. Educational Intelligence and Teaching Systems, Curitiba, PR, Brazil. Available at: <http://www2.videolivraria.com.br/pdfs/23905.pdf>. Accessed on: May 19, 2021.

Salomão, R. 2017. Investors target agricultural input distributors in Brazil. Available at in: <https://revistagloborural.globo.com/Noticias/Empresas-eNegocios/noticia/2017/06/investidores-miram-distribuidoras-de-insumos-agricolas-no-brasil .html>. Accessed on: April 4, 2021

Sandhusen, R. 1998. Basic Marketing. 3rd ed. Saraiva, São Paulo, SP, Brazil.

Sinha, P.; Zoltners, AA 2001. Sales-force decision models: insights from 25 years of implementation. Interfaces, 31:8-44.