AMC Project Phase 3

Group 4

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# **Executive summary**

## **Subject of research:**

The research conducted was done in partnership with Agricultural Manufacturers Canada with the intention of finding the key challenges, understanding the limitations, the motives and drives of Canadian youth, and why they are not interested in working in the Agricultural manufacturing work field. The focus is centered on increasing awareness of the industry, dispelling misconceptions and how to target the right demographic for the best results.

## **Methodology:**

The methodology chosen for this was an online survey, this was chosen for its ability to reach a broad range of people, and effectively gather and categorize the results to be analyzed. The research uses both exploratory and descriptive methods, which are implemented to uncover the motives, perceptions, and feelings of the youths toward the agricultural manufacturing sector.

## **Key findings:**

The key findings were more on the negative side, as people’s prospects of agricultural manufacturing were not so bright. This may be due to the fact that many people have never worked in agriculture as 80% of people surveyed responded they had no work experience in agricultural manufacturing. The other major finding was that many people are just poorly informed about the industry, many people who were neutral or negative about working in the field, simply stated that they do not know enough about the industry at hand.

## **Limitations:**

There were a few limitations, the major two being the geography of the respondents and the demographics. Most respondents lived in Ontario (95%) which means that the data does not give a large scope of the opinions of Canadians, just people who live in Ontario. Another was that demographically the majority of respondents were female students from the ages of 24-33 living in Ontario.

# **Introduction and Background**

The Agricultural Manufacturers of Canada (AMC), originally known as PIMA, was founded in Regina, Saskatchewan in February 1970 by a group of five visionary farmers and Industrial Development Officer Bart Drope. What began as a platform for manufacturers to share their challenges and successes evolved into a powerful collective, recognizing that unity and collaboration could significantly enhance the growth and development of the agricultural manufacturing sector in Canada. Today, AMC stands as a testament to this vision, actively uniting manufacturers and suppliers, supporting their growth, and advocating for their global representation. The organization's mission, "to foster and promote the growth and development of agricultural manufacturing business in Canada," reflects its dedication not only to the industry's prosperity within the nation but also to its significant presence in global markets.

Under AMC's stewardship, the Canadian agricultural manufacturing industry has flourished, boasting impressive economic credentials that are enticing for new talent and conducive to sustained growth. The sector employs over 25,000 people, generating up to $9 billion in revenue, with an impressive 73.6% profitability rate in 2021. The industry's vitality is further highlighted by an average revenue of $1.1 million and a substantial total salary pool of $726.4 million in 2020. Moreover, Canadian agricultural manufacturing has made a strong mark on international trade, with exports totaling $2.8 million as of 2021. AMC's role in this success story is pivotal; the organization not only champions the industry's growth but also actively works to attract and retain top talent. By bridging the gap between industry, academia, and government, AMC is at the forefront of transforming the agricultural sector into a hub of innovation and a key player in global food security and environmental sustainability. This dynamic and forward-thinking approach underscores AMC's commitment to nurturing a skilled workforce that is as diverse as it is proficient, propelling the industry into a future marked by technological advancements and sustainable practices.

The issues and opportunities facing the AMC are engaging the youth and international students in the agricultural sector are multifaceted and require a strategic approach. Key challenges include altering the stereotypical view of agriculture among Canadian youth, who currently show a preference for careers in IT and business. Our strategies focus on showcasing the innovative and technological facets of modern agriculture, developing engaging campaigns that resonate with young people, and transforming the industry’s perception to counter-cultural stigmas.

Simultaneously, we have identified several opportunities that AMC can capitalize on. These include integrating advanced technologies like robotics to appeal to tech-oriented individuals, targeting international students in Ontario and Quebec with tailored campaigns, and establishing global collaborations for experience exchange. Further, by creating relatable success stories and narratives, we aim to enable individuals to visualize themselves in rewarding agricultural careers. Through this comprehensive approach, we aim to assist AMC in overcoming current challenges and seizing these opportunities, thereby revitalizing agriculture and ensuring the sector’s growth and sustainability.

**Key decisions:**

1. Education level targeting: Assess and determine the most effective educational level for initiating agricultural awareness and interest-building campaigns.
2. Identify the key demographic focus, urban versus rural, or a blend of both to maximize outreach and impact effectiveness.
3. Evaluate the balance between public exposure initiatives and internal industry improvements to enhance the attractiveness of agricultural careers.
4. Develop and implement strategies to counter any cultural stigma associated with agricultural careers, utilizing a mix of public relations and real-life success stories.
5. Choose the optimal mix of media channels, weighing the impact of online platforms against traditional advertising methods for maximum reach and engagement.
6. Determine the most effective research methodology, striking a balance between in-depth qualitative insights and broad quantitative data.

**Research objectives:**

Gather comprehensive demographic data from students across elementary, middle, high school, and college levels to precisely identify the optimal age group for targeted educational campaigns."

Gather detailed geographic data from various rural and urban communities to pinpoint where our educational and promotional campaigns should be primarily focused.

Collect socioeconomic data from diverse neighborhoods and schools spanning low, middle, and upper-income brackets to analyze how household income influences interest in agriculture.

Survey students of all ages to gather attitudinal data, aiming to understand their perceptions and beliefs about the agriculture industry.

Conduct a thorough survey among college students to gather awareness data, assessing their knowledge of the agricultural manufacturing field and awareness of potential job opportunities.

Collect awareness data from international students to evaluate their knowledge of the agriculture industry both before and after their arrival in Canada.

Survey students to gather motivational data, focusing on identifying key factors they value most in a prospective job, particularly in the context of the agricultural sector.

Gather attitudinal data from current agricultural workers to understand what aspects of their jobs they find most fulfilling, aiming to share these insights with students.

Collect demographic data from students to determine the proportion actively seeking employment but unable to secure a job within a defined timeframe.

Analyze demographic data from existing workers in the agricultural sector to identify any common traits or backgrounds that may predispose individuals to pursue a career in this industry.

Gather demographic data from post-secondary students to assess how their chosen field of study correlates with their interest in the agricultural sector.

# **Methodology:**

Our research, in partnership with AMC managers, was structured to gain a deeper understanding of the perspectives and motivations of young individuals concerning careers in the agricultural sector, particularly in Ontario and Quebec. The primary method employed in this endeavor was an online survey, carefully chosen for its wide reach and effectiveness in accessing a diverse audience. This approach was especially beneficial given the broad geographical area and the varied demographic groups targeted, including high school students, post-secondary students, and early career individuals.

The type of research conducted through the survey was both exploratory and descriptive. It aimed to systematically gather and analyze data to uncover new insights about the interests, motivations, and aspirations of individuals related to careers in agriculture. The survey used a structured format with specific questions designed to gather detailed information about the respondents’ backgrounds, current situations, and opinions. This approach allowed for capturing a snapshot of the current state of affairs regarding how young individuals perceive and engage with the agricultural sector.

The survey's exploratory aspect was focused on seeking new information that could shed light on what drives individuals to pursue careers in agriculture, identifying their educational needs, and other factors influencing their career choices. On the other hand, the descriptive nature of the research provided a detailed overview of the current perspectives, demographics, and specific attitudes of the respondents towards agricultural careers.

Our sampling frame was a combination of databases from educational institutions and relevant organizations in the targeted regions, supplemented by the use of social media platforms and personal networks to reach potential respondents. Random sampling was employed to ensure a representative and unbiased collection of data, aiming for a confidence level of 95% and a margin of error no greater than 5%.

While the initial target was to gather responses from about 400 participants, the survey concluded with a total of 299 respondents. This number, albeit slightly lower than the target, provided a substantial body of data. The responses were diverse and sufficiently robust, offering valuable insights into the research objectives.

The data analysis from the survey involved quantitative methods to interpret the responses, with statistical analysis of the closed-ended questions to quantify trends and patterns. Additionally, the open-ended questions enriched the data with qualitative insights, offering a more nuanced understanding of the respondents' personal viewpoints and experiences.

# **Findings**

**Our Respondents**

The survey helped us create a general view of our respondents. It's an international college student studying in Ontario (See Figures 1, 2, and 3). Interesting fact, most of the respondents were female (See Figure 12). Their age is mostly ranging from 24 to 33 years (See Figure 11). Also, the majority of students take business programs in college (See Figure 4). When it comes to their employment, we found out that most of them either do not work or have part-time employment (See Figure 10).

**Career**

When it comes to their motives for finding a job, most of the respondents are driven by a desire for a good salary or greater financial rewards with the preference to work in urban locations (See Figures 5 and 14 ). However, when it comes to the interest in agricultural manufacturing or equipment manufacturing the results are not as satisfying.

We decided to research how different factors in Career choice influence not only the desire to work in the industry but also each other. The findings were very interesting. We discovered that some of the correlations have a strong negative relation between each other when it comes to career choice. For instance, while for some respondents the “work-life balance” was the crucial factor in deciding their first job, others could easily sacrifice it if the job gave them the opportunity to develop and grow professionally. The correlation in this case was negative, but moderate (See Figure 19). Most of the responses indicated that people had different views when it comes to what they need in career choice. However, there also was a positive relation. For the respondents who chose “Diversity” as the influence in job search, the “Environmentally conscious company” was also a strong decisive factor, meaning that those factors should be considered together. One more interesting finding was that there is a moderate positive correlation between people for whom industry was more important than their role and ability to travel with work, as their grades for both were high (See Figure 19).

Open-ended questions allowed us to gain insight into the reasons for people to choose their career path. After the categorization of all the responses, we came to the conclusion that the top three reasons are: Salary (#3), Company Environment/Culture (#2), and Growth/Improvement opportunity (#1) (See Figure 15). We also reviewed the reasoning behind the location choice. Unsurprisingly, most of it came from respondents’ personal preferences with “Urban” being the top preferred location. However, we also found out that some people simply do not have preferences in location. For those respondents, the benefits in each location can be a decisive factor (See Figure 16).

**Agriculture**

Then we decided to analyze the interest of respondents in the agricultural industry and the relation of different responses to one another. First, the vast majority of the respondents have never worked in agricultural manufacturing (See Figure 6). Moreover, most of them remain neutral in their interest in working in the industry with only a slight increase in interest for some of them (See Figure 7).

When studying the relations between different responses to understand how different factors influence interest in the industry, we arrived at a set of conclusions. Before the analysis, we created three new variables “AgeScale”, “Employed” and “Unemployed” to be more specific in the influence of those variables on the result. In the end, neither age nor employment status had any correlation with people being employed in the agricultural manufacturing industry. When conducting a similar test but in relation to gender and the residence location, the results showed that there is no correlation in those fields too.

**Agricultural equipment manufacturing**

As with the agricultural industry, we decided to look into responses and their relation, but on the scale of the agricultural manufacturing industry. First, we identified that the majority of the respondents had never worked in agricultural equipment manufacturing before (See Figure 8). Second, we reviewed some general responses and found out that most of the respondents were neutral in their interest in the industry. Surprisingly, the percentage of respondents who were interested and uninterested in it was even for both groups (See Figure 9).

When studying the correlation between the responses we came to the same conclusion as with agricultural manufacturing. Neither being a student, nor an international student influenced the experience of working in the industry. The same conclusion goes to the location. Even the study using the “AgeScale “and employment status showed no correlation in the responses at all.

However, after categorizing and reviewing open-ended questions we gained a clear understanding of people's thoughts on the industry. Even though the majority of respondents were neutral in their interest in the industry, we gained some insight into the reason behind it. Some of the respondents with neutral or low interest in the industry claimed that this is the result of a low level of knowledge about the industry combined with a lack of industry-related skills (See Figure 17). Also, some of the respondents who were neutral in their decision said that they would consider employment there, given the opportunity to do so (See Figure 17).

Moreover, when analyzing the open-ended questions related to how to entice them to join the industry, we realized the reason for the low interest. People genuinely feel that the industry does not generate enough revenue to allow high salaries for the employees. Surprisingly, there was a group of respondents who would not consider a career in the industry under any circumstances. Also, one of the enticements under which respondents would consider working in the industry is a desire for more knowledge about the industry (See Figure 18).

# **Limitations**

To properly evaluate the constraints of our study, it is essential to acknowledge the demographic and experiential prejudices within our respondent pool. One major limitation stems from gender and age bias as most respondents were female and aged between 24-33 years old, potentially resulting in skewed findings towards their preferred career choices or industry perspectives. Additionally, a significant number of participants consists primarily of international college students enrolled in business programs who are mostly unemployed or work part-time; this selection overlooks other full-time workers' diverse viewpoints across various academic disciplines. There is also a geographic constraint with over 95% being located solely in Ontario that may not accurately depict student sentiments found elsewhere worldwide—notably limiting perceptions about sought-after careers or industries globally beyond those localized opinions obtained here Finally adding potential misunderstanding by some participating lacking experience working directly inside agriculture—clouding judgment regarding what motivates individuals aspiring employment. The bias specific to the industry, noted by a considerable number of participants without prior involvement in agriculture, may have contributed to their impartial or apathetic standpoint toward this field. This fails to account for those with hands-on experience and investment in farming practices. These biases highlight the necessity for a diverse and expansive sample size when analyzing professional motivations and sectoral inclinations — particularly within fields like agriculture—to gain an all-encompassing perspective.

# **Conclusion and Recommendations**

1. Strategic engagement plan for enhancing awareness.

Based on our research results, we recommend that AMC implement a comprehensive and unified approach to tackle the existing lack of awareness and interest among potential newcomers in the agricultural manufacturing field. This strategy should involve effectively combining educational outreach initiatives with targeted marketing strategies for dispelling industry misconceptions, all tailored to reach out specifically to students based in Ontario and Quebec.

According to our survey, there is a significant opportunity for engagement with students pursuing post-secondary education. The majority of respondents (63%) are enrolled in college while 18% attend university; additionally, it's worth noting that the largest proportion (61%) consists of international students. These individuals show particular interest in commerce, management, and business administration which aligns well with AMC's industry focus. However, one major challenge emerges: more than 80% have little or no experience working within agriculture or agricultural equipment manufacturing areas where we operate. Furthermore, nearly four out of every ten participants express uncertainty regarding careers related to agriculture despite their potential fit for such an option based on their academic interests alone. The reality underscores the importance of developing a solid strategy aimed at better engaging this specific demographic group effectively all through different channels available and made accessible if necessary, so as not to let opportunities slip by unutilized.

To promote the numerous and promising agricultural manufacturing jobs available, AMC ought to establish collaborations with academic institutions. The goal is to organize enlightening workshops, seminars, and interactive sessions where young people can fully grasp the breadth of opportunities in this field. Working alongside these educational efforts should be vibrant marketing campaigns tailored specifically to appeal to students' interests and ambitions. Of utmost importance are salary package incentives-- a key factor for jobseekers at this stage who must be made aware that agriculture promises lucrative career prospects as well as urban employment options typically sought after by responders; together running an effective program capable of changing negative perceptions regarding work in rural areas.  
  
It is just as important to actively challenge misconceptions and stereotypes surrounding the field of agriculture. Demonstrating real-life achievements, sharing testimonials from industry experts, and emphasizing technological advancements within the sector are all critical in redefining its image. By showcasing how agricultural work fits into contemporary career paths and debunking common misunderstandings associated with it, AMC has an opportunity to change perceptions among a demographic that could be highly interested and engaged in both agricultural manufacturing and equipment industries.

1. Streamlined Survey Structure Recommendation for AMC

To maximize the effectiveness of their survey and accurately capture respondents' nuanced preferences and career aspirations, AMC should consider restructuring the survey for a more logical flow of questions. This is especially important after respondents have chosen their desired career path. A well-structured survey will not only improve data quality but also provide detailed insights into the unique interests and requirements of various student groups.  
  
To begin the survey, it's important to gather initial demographic data as foundational information. This includes details such as the respondent's current location, age, and whether they are a student or not. These questions help establish overarching characteristics of those participating in the study – fundamental for any further analysis. From there onward, respondents will be asked about their primary interests or fields of study at present. This significant moment within the survey allows us to organize participants into discreet categories based on career streams like management, business administration, commerce engineering, and agricultural sciences - this enables a more focused examination of these areas specifically later down the line.

After a respondent makes their career stream choice, the survey will switch to tailored follow-up questions that probe into details tied to their field. The line of questioning for commerce-centered students might inquire about business positions within agriculture, thoughts on industry growth prospects, and skills they think are essential in such roles. This custom approach guarantees that gathered information pertains directly to what respondents care about most regarding work opportunities leading to insights with greater accuracy and significance.  
  
The following part of the questionnaire will focus on career goals and preferences. In this section, inquiries will cover topics like job-life balance, desired earnings, work environment values as well as location inclinations encompassing urban vs rural disparities. The objective is to uncover how each group's aspirations differ concerning various professions while providing crucial insights into their distinct expectations and motives.  
  
In cases where career paths align closely with AMC's focus, like agricultural sciences or engineering, the questionnaire would delve deeper into specific topics. This section of queries will inquire about participants' level of interest in agriculture as an industry and assess their awareness regarding opportunities within manufacturing for both equipment and agriculture-related products. Furthermore, this segment seeks to gauge overall opinions towards these sectors among respondents.

# **Appendix**

Figure 1

A graph with a blue bar and white text

Description automatically generated

Figure 2

A pie chart with different colored triangles

Description automatically generated

Figure 3

A pie chart with a number of percentages

Description automatically generated

Figure 4

A graph with blue squares and black text

Description automatically generated

Figure 5

A graph with blue squares and white text

Description automatically generated

Figure 6

A pie chart with a blue triangle

Description automatically generated

Figure 7

A graph of blue rectangular bars

Description automatically generated

Figure 8

A pie chart with a blue triangle

Description automatically generated

Figure 9

A graph of blue rectangular objects

Description automatically generated with medium confidence

Figure 10

A graph of blue rectangular bars with white text

Description automatically generated

Figure 11

A graph of ageing

Description automatically generated with medium confidence

Figure 12

A blue squares with black text

Description automatically generated

Figure 13

A graph with blue squares and black text

Description automatically generated

Figure 14

A graph of blue squares and white squares

Description automatically generated

Figure 15

Figure 16

Figure 17

Figure 18

Figure 19

A screenshot of a chart

Description automatically generated