

# International Interests: Student and Industry Perspectives on Agricultural Communication Curriculum Development in Ontario

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# Abstract

This study explores the potential development of an agricultural communication program at the University of Guelph. It aims to understand the current knowledge of, and interest in, the discipline among Ontarian agriculture students and industry professionals, and the perceived importance and employability of hypothetical program graduates. Using a qualitative descriptive case study approach, focus groups with 18 students and six industry professionals were conducted. Data were collected through open-ended questions, analyzed using open coding and thematic analysis, and triangulated with demographic surveys. The findings reveal a general lack of understanding of agricultural communication among Ontarian students, who nonetheless recognize the field's potential to bridge gaps between producers and consumers, particularly through social media and diverse job opportunities. Industry professionals emphasized the growing importance of storytelling, crisis communication, and the need for polyskilled graduates capable of addressing varied communication needs within the agricultural sector. Both stakeholder groups expressed interest in an agricultural communication academic program. Recommendations include engaging broader industry support for the program, integrating agricultural communication training across existing agricultural disciplines at the University of Guelph, and continuing research to refine curriculum development.

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### **Introduction and Problem Statement**

The agricultural communication discipline is present and growing in the United States, with over 40 programs nationwide (Cannon et al., 2016; Fernandez et al., 2020; Miller et al., 2015; Tedrick, 2009). These academic programs have consistently adapted to encompass modern characteristics as dictated by industry (Cartmell & Evans, 2013; Tucker et al., 2003). Today, programs focus on communicating agricultural sciences and information to consumers, teaching a blend of courses influenced by mass communications, journalism, and agricultural industries (Ahrens & Gibson, 2013; Cannon et al., 2016; Corder & Irlbeck, 2018; Irani & Doerfert, 2013; Kurtzo et al., 2016; Tucker et al., 2003. These skills are in high demand due to increased consumer scrutiny, distancing from agriculture, and a decrease in agricultural literacy (Cannon et al., 2016; Kurtzo et al., 2016). Moreover, the discipline is expanding internationally, with recent studies proposing agricultural communications academic programs in the United Kingdom and Australia, showing value in international expansion (Miller et al., 2020; Thorn et al., 2022).

#### **Problem Statement**

Considering international impacts, the Canadian agricultural sector remains one of the dominant industries in the nation (Agriculture and Agri-Food Canada, 2017) but lacks dedicated agricultural communication undergraduate degree programs to address declining agricultural literacy. The University of Guelph, the flagship agricultural institution in Canada, does not offer an undergraduate distinction in the discipline (University of Guelph, n.d.). This study explores Ontario agricultural stakeholders' understanding of agricultural communications and illustrates stakeholder desire for a future agricultural communication program at the University of Guelph to inform curriculum development efforts, while making important international contributions to disciplinary literature.

# **Theoretical and Conceptual Framework**

This study employs Wolf's (2007) curriculum development model and Glatthorn's (2005) process-oriented curriculum theory to guide its exploration of agricultural communication program development. Glatthorn's (2005) perspective, which focuses on the stages of curriculum development, provided the foundation for stakeholder engagement and curriculum design. It emphasizes understanding preliminary matters such as which groups should be represented in developmental sessions, the participation structure, and identifying starting points for discussions. This theoretical perspective guided the initial conversations with stakeholders to determine interest in program development, ensuring a comprehensive approach to curriculum planning. Glatthorn's (2005) emphasis on using multiple sources to develop curriculum further informed the selection of stakeholders for this study.

Wolf's (2007) model, encompassing three phases of *Curriculum Visioning, Curriculum Development*, and *Alignment, Coordination, and Development*, structured the study's approach to understanding stakeholder perceptions and informed the study methods and participants.

While each phase is important for holistic curriculum development, this study follows the structure of the preliminary *Curriculum Visioning* phase. In this phase, Wolf (2007) suggests initial conversations through focus groups with key stakeholders, such as students and employers, to determine their perceptions and needs. This phase is crucial for gathering insights and setting a foundation for subsequent curriculum development stages.

These frameworks aid in identifying key stakeholder groups and guiding the initial conversations necessary for developing a relevant and effective agricultural communication program. This integrated approach aims to ensure that the proposed program will effectively prepare graduates to meet the challenges of the agricultural communication field and support the growth and development of the agricultural industry in Ontario and broader Canada.

# Purpose

This needs assessment explored Ontarian agricultural industry professionals' and agricultural students' understanding of agricultural communication and illustrated stakeholder requests for a future Ontarian agricultural communications program situated in the University of Guelph. The following research questions guided this study:

- 1. What do Ontarian agriculture students and industry professionals know about agricultural communication?
- 2. Do Ontarian agriculture students desire an agricultural communication program?
- 3. Do Ontarian agricultural industry professionals desire an agricultural communication program?
  - a. How important are skilled agricultural communication graduates in the eyes of industry professionals?
  - b. How employable would these graduates be in the Ontarian agricultural industry?

# Methods

A qualitative descriptive needs assessment design was chosen to gain a foundational understanding of the landscape of Ontarian agricultural stakeholder perceptions for proposed agricultural communication curriculum. Needs assessments are customary for beginning stages of curriculum development (Gonsalves et al., 2014). As part of a larger study, participants were selected using purposive and snowball sampling methods. Purposive sampling was employed to select ideal industry representatives (n = 6) based on desired characteristics or knowledge (Palinkas et al., 2015). Representatives from the main Ontarian agricultural sectors (beef, dairy, poultry, swine, and general food production) were identified through provincial commodity group webpages and recruited through an IRB-approved email. Snowball sampling broadened the reach of the study for the student population (n = 18) (Sadler et al., 2010). The president of the Student Federation of the University of Guelph Ontario Agricultural College (OAC) put out a call for recruitment, with an additional call disseminated through the OAC newsletter. Students then recommended others for participation. Emphasis was placed on majors and years in school.

#### **Data Collection and Analysis**

Data were collected via focus groups conducted over Zoom to accommodate location challenges. Four focus groups with students (n = 6; n = 4; n = 4; n = 4) and two with industry professionals (n = 4; n = 2) were conducted between September and November 2022. Each session lasted approximately one hour. A demographic survey was distributed via Qualtrics after focus groups. Open-ended questions facilitated participant conversation, aligning with case study recommendations (Yin, 2016).

Focus group sessions were recorded and transcribed, with participants receiving identifying numbers to ensure confidentiality. The transcripts manually analyzed using open coding, which allowed for thematic discovery among the data. Coding and thematic analysis were conducted by the primary researcher. Demographic survey responses were analyzed using SPSS for quantitative frequencies.

#### Limitations, Trustworthiness, and Scope of Study

The study employed a relatively small sample size (*n* = 24), which is common in qualitative research (Marshall, 1996). Student participants were more represented than industry professionals due to convenience and scheduling challenges. Different focus group leaders for some sessions could introduce variation in responses, though a script was provided for all moderators to follow, and the original moderator's sessions were recorded and reviewed by the other moderators for consistency. Measures were taken to enhance trustworthiness, including credibility, dependability, and transferability (Cope, 2014). Data triangulation involved comparing student and industry responses with researcher notes and relevant literature, enhancing the study's validity (Yin, 2016). Crystallization further enriched trustworthiness by incorporating the primary researcher's experiences with Ontarian agriculture, providing context to the findings (Lindlof & Taylor, 2011). This study is part of a larger investigation into the development of agricultural communication programs.

#### **Positionality Statement**

The primary researcher grew up in rural Ontario and has knowledge of Ontarian dynamics and institutional affiliations. This offers a unique lens to approach analysis. Both other researchers are agricultural communication faculty with no personal or professional connections to the subjects.

# **Findings**

# **RQ1:** What do Ontarian agriculture students and industry professionals know about agricultural communication?

#### Student Participants

This research question elicited a broad array of student responses. Students noted their level of understanding of the field and what came to mind for them when considering agricultural communications. These encompassed areas of disciplinary purpose, and job opportunities and

availability. Identified themes among students were *lack of understanding, bridging gaps, social media,* and *broad and diverse job opportunities*.

Most participants admitted to having a *lack of understanding* of agricultural communication. They noted having less concrete knowledge of topics covered by agricultural communication and professional opportunities in the field. This was consistent across student focus groups and may be attributed to a lack of educational opportunities in the discipline.

The theme of *bridging gaps* emerged early, largely through the context of connecting producers with consumers. Students consistently leveraged bridging the gap between consumers and producers to characterize the role of agricultural communication in the industry and as a valuable skill to be learned through study in this discipline. One student said, "When I think about ag communication, I think of the producer-consumer gap and trying to bridge that gap." A gap between researchers and agricultural producers also surfaced among student responses.

From this line of questioning, students characterized agricultural communication and identified job opportunities. *Social media* prominently emerged. This characterization from students was well articulated by one student, who noted that, "A lot of communications work is definitely over social media, and a lot of farmers are on Twitter largely to catch each other up on what's going on." Student participants singled out younger generations as frequent users of the medium and noted social media as a prominent career opportunity.

Looking more specifically at careers, student participants characterized *broad and diverse job opportunities* in the field of agricultural communication. Education was a common response among students for characterizing the field of agricultural communication and as a career option for program graduates. This can be seen in another student's response, who when thinking of what agricultural communication means to her said, "My first thought is 100% education. Communication is key if you're trying to educate someone on any topic, not just agriculture, so that's really the first thing that comes to mind and I feel they are really connected." A different student also noted that careers in educational fields would be applicable for graduates. She specifically mentioned the lack of a formal agricultural education system in Canada but pointed out that "[agricultural companies or commodity groups] have programs where some of their employees will go and teach kids about agriculture, so that's a possibility for agricultural communicators."

Agricultural boards and commodity groups were identified as prominent employment opportunities for graduates. Students named specific organizations, like Dairy Farmers of Ontario, with these boards communicating to producers and consumers. Student participants also emphasized marketing as a key component of agricultural communication, including opportunities outside traditional agriculture. Journalism was another noted job opportunity. The range of identified careers also extends to job availability. Students noted a disparity between full-time job positions in agricultural communication versus part-time positions or internship opportunities. One student accentuated this, saying, "Especially in private industry, which is what I want to do, there's not a ton of jobs for post-grads and it's hard to find space for us outside of internships." However, other students, disputed this, with one stating, "I think there are a lot of communication jobs out there and there will continue to be more, but I think they're not as well-known."

#### **Industry Participants**

For industry participants, the themes that emerged included *transactional field*, *storytelling*, and *translating*. When asked what comes to mind when considering agricultural communication, an interesting response was the idea of a *transactional field*. One professional illustrated that, in the past, communications work was transactional, involving professionals disseminating the bare facts about the industry as a "necessary evil," but indicating a shift to more engagement and two-way communication.

Industry participants also characterized the field of agricultural communication through the lens of *storytelling*. Another professional best characterized this theme by saying, "[Agricultural communicators] are storytellers. We tell the story to a wide variety of different audiences and how you tell that story depends on who you're selling it to." Aside from storytellers, industry professionals noted that agricultural communicators often work *translating* for the industry. One summarized this by saying, "I think the key role we play is translating a variety of information to different audiences effectively."

#### RQ2: Do Ontarian agriculture students desire an agricultural communication program?

When directly asked if they would be interested in studying agricultural communication, most students responded positively, with responses sorting into *preferred format* and *degree of interest*. For *preferred format*, the opportunity to study agricultural communication as a minor or certificate was most frequently mentioned. Participants noted that this discipline would be a valuable supplement to other existing agricultural programs at the University of Guelph OAC. Students said that communication skills apply to a variety of agricultural careers, establishing value for students in other program areas to receive this training. A student notably mentioned that "The University of Guelph doesn't currently have a lot of good programs with these types of courses, so it would be very beneficial for a lot of different people."

Other students did indicate a desire to study agricultural communication as an undergraduate major. Among the five students who expressed an interest in having this as their primary discipline, a commonality of "settling" for another agricultural major to still be involved in agriculture emerged. This is summarized by one student by saying, "I absolutely would study in this. I didn't have an interest in ag business, but I wanted to be an 'aggie,' so I settled."

Looking at *degree of interest*, some students reported that they initially would have considered enrolling in an agricultural communication program but now appreciate the program they currently study. Only two students expressed a lack of desire to study agricultural communication in any capacity. Markedly, these students all indicated that they still saw value in agricultural communication. One participant exemplified this, stating, "I'm not personally interested but I think it will become very prevalent in the future. Any job will require communication skills, especially in agriculture, so everyone should have knowledge in this." Students unanimously indicated that they believed an agricultural communications program would be a valuable opportunity for a variety of OAC students. From these responses, they implied that the discipline would be considered a supplement for any existing agricultural major and viewed as increasing job acquisition among agricultural graduates. All students agreed that an agricultural communication program would not only coincide with but also uplift the culture and experience of the OAC. One student said,

I think there's a lot of people that are either taking animal science, or food, agriculture and resource economics, or ag business because they want to be in agriculture, but they don't really fit. So, this would benefit the school and a lot of students.

# **RQ3:** Do Ontarian agricultural industry professionals desire an agricultural communication program?

Industry professionals were given different questions. The themes that emerged were *growth and transition, need for poly-skilled communication graduates,* and *crisis communications and activism.* When asked what place agricultural communication has in the Canadian agricultural industry, professionals noted that the field is an area of *growth and transition.* Aside from a shifting workforce, changes were also mentioned in consumer interactions and the agricultural industry's perceptions of the field's importance. Participants gave personal accounts informed by their experiences that indicated a surge in career opportunities. One participant summarized this, saying,

Our company is pulling away from advertising and marketing budgets and investing in communications elements. These platforms are much more effective at driving our message forward...so it's a growth industry. It's going to steal some of the budget from some of the traditional platforms for how we try to influence our customers' decisions.

Industry participants stated a *need for poly-skilled communication graduates*. Professionals connected budgetary issues playing a role in this, with two professionals noting that many agricultural companies lack the fiscal range to hire specialists in different areas of communications despite needing a variety of skillsets. This requires graduates to have a comprehensive understanding of a wide range of communications areas.

*Crisis communications and activism* were notable themes for job opportunities in the field. Multiple participants emphasized the role crisis communications plays in agriculture, particularly during a time when the industry is under immense scrutiny and facing unprecedented challenges. Anti-agriculture activism was presumed to endure, with participants stating the need for trained agricultural communicators to counteract these attacks on the industry and defuse situations. One specifically connected crisis communications and activism, saying, "I don't think activism is going anywhere, and a key part of crisis communications is [understanding how to] keep your advocates, shift your 'ambivalents' and counteract your adversaries."

When asked what emphasis should be placed on educating and training students in agricultural communication, participants unanimously responded that it is a priority. They emphatically highlighted the value in all agricultural students having some level of training in agricultural

communications and that a notable gap exists at the University of Guelph. One participant stated, "It's extremely high priority. We hire a summer intern every year to help the marketing team and other than their own social media experience, we haven't had any that have had formal grounding in their education to prepare them." Another substantiated this, stating, "There's a huge gap. People either go to Guelph for animal science or ag business but they can't get an agriculture background in anything communications related." A different professional even stated, "Every single person that I hired for 15 years out of the University of Guelph said the same thing, 'My education did not prepare me for this job.'"

# RQ3a and b: How important are skilled agricultural communication graduates in the eyes of industry professionals? How employable would these graduates be in the Ontarian agricultural industry?

Given the direct relation to the broader RQ2, much of the same data is reported for this subquestion. The emergent themes were *priority for all agricultural students, growth industry,* and *new job opportunities.* Industry participants all agreed that this should be a made an educational *priority for all agricultural students.* Participants specifically stated that the OAC needs a program to train students in this discipline, with one professional claiming "It needs to be built as a base for every ag and food student to have because...you need a base in communications, and I think we need a specialization for people who want to do it as a career."

When tracing how hireable these graduates would be, the industry responses around job opportunities were the most reflective. Professionals highlighted agricultural communication as a *growth industry* in broader Canadian agriculture, with two professionals specifically stating that *new job opportunities* within the past 20 years have been created that did not exist when they were graduates of the University of Guelph OAC.

# **Conclusions, Discussion, and Recommendations**

Perceptions of agricultural communication varied between stakeholders. Students generally had limited knowledge, often holding stereotypical views of the field. Industry professionals had more informed perspectives, viewing agricultural communication as evolving from transactional to more engaging, emphasizing storytelling and translation of complex information (Joubert et al., 2019; Park et al., 2021). Social media emerged as a key component for both groups, and students recognized various career opportunities, noting the discipline's expanding role in Canadian agriculture (Canadian Federation of Agriculture, n.d.). All students recognized the discipline's potential value and agreed that an agricultural communication program would enhance the University of Guelph OAC's offerings. Industry responses emphasized the need for collaborative communication skills to address complex issues. They identified agricultural communication as a growth area, with communication efforts often proving more effective than traditional marketing (Cannon et al., 2016; Fernandez et al., 2020; Miller et al., 2015; Weckman et al., 2000). Professionals stressed the need for poly-skilled communicators due to budget constraints (Doerfert & Miller, 2006). Crisis communications was also crucial (Hamel & Saindon, 2017; Kovar & Ball, 2013; Powell et al., 2008), aligning with

trends in U.S. programs (Cannon et al., 2016; Edgar et al., 2012). Industry participants unanimously prioritized training in agricultural communication, citing a gap at the University of Guelph OAC.

The introduction of an agricultural communication program would supplement existing agricultural programs. Improved communication skills would enhance students' employability and address a critical need in the agricultural sector (Cannon et al., 2016; Kurtzo et al., 2016). Industry professionals' need for poly-skilled communicators indicates that graduates from such a program would be highly employable. Moreover, these findings align with industry trends in the United States and support the growth of the agricultural communication field (Doerfert & Miller, 2006; Miller et al., 2015). Desired skills and competencies identified by Ontarian stakeholders largely reflect existing subject matter in U.S. agricultural communications programs (Cannon et al., 2016; Miller et al., 2015), substantiating the discipline's content and confirming international connections between the U.S. and Ontarian industries. At present, the literature centers on U.S. curriculum, with very few publications on the needs of Canadian industry and student stakeholders. With an observed desire to expand the discipline international example of such efforts and a framework for international curriculum development work.

In future, the Canadian agricultural industry should be more broadly engaged to support such a program. With interest established, the University of Guelph OAC should be involved in future efforts to identify how and where such a program would best fit within the institution. Industry stakeholders should be engaged in the process. Further research in this subject should continue the other stages of Wolf's (2007) framework to have a comprehensive curriculum development plan. Other stakeholders' opinions from outside Ontario or within the University of Guelph should also be taken into consideration. Additionally, studies should be conducted to better understand whether there is value in moving away from traditional *agricultural* communication, and if more emphasis should be placed on other related, but distinct areas such as science, life science, food, and natural resources communication.

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#### References

Agriculture and Agri-Food Canada (2017, November 10). *Canada's agricultural sector continues to see economic growth.* Government of Canada. <u>https://www.canada.ca/en/agriculture-agri-</u> <u>food/news/2017/11/canada\_s\_agriculturalsectorcontinuestoseeeconomicgrowth.html</u>

- Aherns, C. A., & Gibson, C. (2013). The evolution of the agricultural communications degree program at Texas Tech University: A historical perspective. *Journal of Applied Communications*, *97*(2), 36-49. <u>https://doi.org/10.4148/1051-0834.1119</u>
- Canadian Federation of Agriculture. (n.d.). *Our members organizations*. Canadian Federation of Agriculture. <u>https://www.cfa-fca.ca/about-us/our-members-organizations/</u>
- Cannon, K. J., Specht, A. R., & Buck, E. B. (2016) *Agricultural communications: A national portrait of undergraduate courses*. Faculty Publications: Agricultural Leadership, Education & Communication Department, 80. <u>http://digitalcommons.unl.edu/aglecfacpub/80</u>
- Cartmell D. D., & Evans, J. F. (2013). Understanding whence we came: Role of the Association for Communication Excellence in the development of agricultural communications during the past century—and future implications. *Journal of Applied Communications*, 97(2). <u>https://doi.org/10.4148/1051-0834.1120</u>
- Cope, D. G. (2014). Methods and meanings: Credibility and trustworthiness of qualitative research. *Oncology Nursing Forum*, *41*(1), 89-91. <u>https://doi.org/10.1188/14.ONF.89-91</u>
- Corder, J., & Irlbeck, E. G. (2018). Agricultural communications skills, abilities and knowledge desired by employers compared to current curriculum: A literary review. *Journal of Agricultural Education*, *59*(4), 177-193. <u>https://doi.org/10.5032/jae.2018.04177</u>
- Doerfert D. L., & Miller, R. P. (2006). What are agriculture industry professionals trying to tell us? Implications for university-level agricultural communications curricula. *Journal of Applied Communications, 90*(3), 17-31. <u>https://doi.org/10.4148/1051-0834.1273</u>
- Edgar, L. D., Edgar, D. W., McGuire, A., Rutherford T. A., Doerfert, D. L., & Murphrey, T. P. (2012). Crisis communication needs assessment: A Delphi study to enhance instruction for agricultural communicators and other stakeholders. NACTA Journal, 56(4), 52-62. https://www.nactateachers.org/index.php/vol-56-num-4-dec-2012/2013--crisis-communication-needs-assessment-a-delphi-study-to-enhance-instruction-for-agricultural-communicators-and-other-stakeholders
- Fernandez, J. M., Goecker, A. D., Smith, E., Moran, E. R., & Wilson, C. A. (2020). Employment opportunities for college graduates in food, agriculture, renewable resources and the environment. United States Department of Agriculture. <u>https://www.purdue.edu/usda/employment/</u>
- Glatthorn, A. (2005). *Curriculum leadership: Development and implementation*. Sage Publications Inc.

- Gonsalves, C. L., Ajjawi, R., Rodger, M., & Varpio, L. (2014). A novel approach to needs assessment in curriculum development: Going beyond consensus methods. *Medical Teacher, 36*(5), 422-429. <u>https://doi.org/10.3109/0142159X.2013.877126</u>
- Hamel M. A., & Saindon, G. (2017). Shaping Canadian agriculture—A reflection on the future role of agronomists in Canadian agriculture. *Canadian Journal of Plant Science*, 97(6), 957-963. <u>https://doi.org/10.1139/cjps-2016-0385</u>
- Irani T., & Doerfert, D. (2013). Preparing for the next 150 years of agricultural communications. Journal of Applied Communications, 97(2), 6-13. <u>https://doi.org/10.4148/1051-</u> 0834.1109
- Jones S. R., Torres, V., & Arminio, J. (2014). *Negotiating the complexities of qualitative research in higher education* (2nd ed.). Routledge Press.
- Joubert, M., Davis, L., & Metcalfe, J. (2019). Storytelling: The soul of science communication. Journal of Science Communication, 18(5), 1-5. <u>https://doi.org/10.22323/2.18050501</u>
- Kovar, K. A., & Ball, A. L. (2013). Two decades of agricultural literacy research: A synthesis of the literature. *Journal of Agricultural Education*, 54(1), 167-178. <u>https://doi.org/10.5032/jae.2013.01167</u>
- Kurtzo, F., Hansen, M. J., Rucker, K. J., & Edgar, L. D. (2016). Agricultural communications: perspectives from the experts. *Journal of Applied Communications, 100*(1), 17-28. <u>https://doi.org/10.4148/1051-0834.1019</u>
- Lindlof, T. R., & Taylor, B. C. (2011). *Qualitative communication research methods* (3rd ed.). Sage Publications, Inc.
- Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice*, 13(6), 522-525. https://doi.org/10.1093/fampra/13.6.522
- Miller, J. D., Large, M., Rucker, J., Shoulders, K., & Buck, E. (2015). Characteristics of U.S. agricultural communications undergraduate programs. *Journal of Applied Communications*, 99(4), 76-90. <u>https://doi.org/10.4148/1051-0834.1063</u>
- Miller, J. D., Maples Bell, S., Rucker, J., Buck, E., & Parks, A. (2020). Introducing the academic discipline of agricultural communications to the United Kingdom. *Journal of Applied Communications*, 104(4), 1-21. <u>https://doi.org/10.4148/1051-0834.2364</u>
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015).
  Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Administration and Policy in Mental Health and Mental Health Services Research, 42(5), 533-544. <u>https://doi.org/10.1007%2Fs10488-013-0528-</u>

- Park, E., Forhan, M., & Jones, C. A. (2021). The use of digital storytelling of patients' stories as an approach to translating knowledge: A scoping review. *Research Involvement and Engagement*, 7(58), 1-19. <u>https://doi.org/10.1186/s40900-021-00305-x</u>
- Powell, D., Agnew, D., & Trexler, C. (2008). Agricultural literacy: Clarifying a vision for practical application. *Journal of Agricultural Education*, *49*(1), 85-98. https://eric.ed.gov/?id=EJ839874
- Sadler, G. R., Lee, H., Lim, R. S., & Fullerton, J. (2010). Recruitment of hard-to-reach population subgroups via adaptations of the snowball sampling strategy. *Nursing & Health Science*, 12(3), 369-374. <u>https://doi.org/10.1111/j.1442-2018.2010.00541.x</u>
- Tedrick, B. (2009, April 4). An abbreviated timeline in the development of agricultural communications. Association for Communication Excellence. https://aceweb.org/agricultural-communications-timeline/
- The Ohio State University Undergraduate Admissions (n.d.) *Agricultural Communications*. <u>https://undergrad.osu.edu/majors-and-</u> <u>academics/majors/detail/7#:~:text=The%20agricultural%20communication%20major%20provide</u> <u>s,enjoy%20persuading%2C%20writing%20and%20designing</u>.
- Thorn, L., Meyers, C., Fraze, S., & Akers, C. (2022). Identifying stakeholders' needs for agricultural communications in higher education curriculum in Australia. *Journal of Applied Communications*, 106(4), 1-16. <u>https://doi.org/10.4148/1051-0834.2462</u>
- Tucker, M., Whaley, S. R., & Cano, J. (2003). Agricultural education and agricultural communications: Striking a proper balance in the academy. *Journal of Agricultural Education, 44*(1), 22-30. <u>https://doi.org/10.5032/jae.2003.01022</u>
- University of Guelph (n.d.). *MSc in Capacity Development and Extension (thesis/research).* <u>https://www.uoguelph.ca/programs/msc-in-capacity-development-and-extension/</u>
- Weckman, R., Witham, D., & Telg, R. (2000). Southern agricultural communications undergraduate programs: A survey. *Journal of Applied Communications*, 84(4), 41-50. <u>https://doi.org/10.4148/1051-0834.2157</u>
- Wolf, P. (2007). A model for facilitating curriculum development in higher education: A facultydriven, data-informed, and educational developer–supported approach. *New Directions* for Teaching and Learning, 2007, 15–20. <u>https://doi.org/10.1002/tl.294</u>
- Yin, R. K. (2016). Qualitative research from start to finish (2nd ed.). Guilford Press.

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