

Getting Research into Practice

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What is it?

Getting Research into Practice (GRIP) is the terminology we are giving to the transfer of information from the provider (e.g. researchers, organizations, academia, advisors) to the receiver (e.g. industry, farmers, practitioners). Regardless of what you call it, getting research into practice remains a challenge. The saying, “it takes two to build a bridge” explains the relationship between the provider and the receiver in this context. And the key here is that this bridge must be two-way to be effective. Both parties can provide a great deal of help and information to each other. In fact, of all the best practices out there designed to help information providers disseminate their information more effectively, the importance of understanding and engaging your audience is perhaps the most critical.

As most in agriculture will appreciate, GRIP is not just about getting research results to producers. Simple knowledge of research results is not enough (in most cases) to motivate change. We need to package up our research messages in creative ways that offers both timely and considerate information. This requires careful planning and effort! For example, we must take into account other relevant research; context of the location, the times and the industry; economics; and appropriate presentation (format, language, channel) when trying to achieve GRIP. Most importantly, research and results must be meaningful in the first place to be adopted by the users. Once again, engagement between both parties, even before the research is started, is necessary for successful adoption.

There is now a plethora of terms designated to the idea of getting research into practice, and we just created a new one. Knowledge Translation and Transfer (KTT) has been used most commonly in Ontario in regards to the scientific community and Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). Knowledge Mobilization (KMb) is commonly used within academia and Extension has been used more traditionally, and still used frequently internationally. GRIP summarizes the process of taking research and getting it into practice by those who can use it and benefit from it. A simple process to understand, however, Ontario, like most other areas, has an opportunity to greatly improve how we accomplish GRIP.

Why it matters to the Ontario livestock industry:

In order for the Ontario livestock sector to be competitive and sustainable, farmers need a system that makes research results accessible in a manner that allows effective decision making on the farm. This is a critical step in a successful innovation system. In Ontario, like most parts of the developed world, direct government involvement in getting research results into action on farms, traditionally known as extension, has decreased significantly. In the 1990's OMAFRA eliminated local county extension in its restructuring, as did many other ministries. In its place they have

focused on communication with farm intermediaries (e.g. veterinarians, nutritionists, agronomists), and placed more expectations on researchers and industry to facilitate knowledge sharing. While this approach helps ease the financial burden for the government, it relies heavily on these farm advisors to engage in government events and activities designed to educate/inform them, and to consistently communicate with the farmer. Easier said than done!

Over the years, most developed regions, including Ontario, have transitioned from heavy public extension models to privatization and multi-stakeholder collaborative models. Adding complexity to this change is the growth of many new communication channels, such as the internet and social media. A coordinated and functional process has not yet evolved in Ontario, though several current initiatives are underway to help with the transition.

In 2017, the Canadian Advisory Council on Economic Growth released what is known as the “Barton Report”. The intent was to identify “bold ideas that will significantly improve Canada’s economic growth trajectory”. Agriculture was named as one of six sectors with high potential. To reach that potential, agriculture must have a sound innovation system, including a highly functional process for GRIP.

More specific to livestock, alternatives such as plant-based and cellularly derived products are gaining favour with consumers. The livestock sector needs more industry and academia collaboration and engagement. We need cross-sectoral thinking, interdisciplinarity, and more farmer-engaged research. We need to gather and coordinate efforts of all parties to create an effective approach to GRIP.

Frameworks and key considerations

There are many different approaches to GRIP. Approaches differ from the traditional “top-down” to the more progressive “bottom-up”. Traditionally the “top-down” approaches follow the teacher to student paradigm, where the knowledge holder/creator (e.g. researcher) transfers the knowledge to the receiver (e.g. producer). While this one-way transfer of information is efficient, and can be effective, it is also fraught with challenges. Whereas the “bottom-up” approach encourages a two-way sharing of information and constructive discussion, which has often been shown to be effective as it provides the end-user with a voice and ensures results are more adequately tailored to needs. Although, it should be noted that there are numerous factors that ultimately influence success, not simply the use of one style of approach.

There are many frameworks and methods out there for researchers to use, which offer step-by-step guides for creating a plan for GRIP. For example, the Understanding-User-Context Framework for knowledge translation provides five steps that are provided as an outline to engage translation between researchers and users, these steps are found in many frameworks and summarize the key points of GRIP (Jacobson et al., 2003):

1. **The user group:** Who is the intended audience?
2. **The issue:** What is the issue motivating this project?
3. **The research:** What research are you hoping to conduct?
4. **The researcher-user relationship:** What is the relationship between the researcher and user group and what can be learnt from each other?
5. **The dissemination strategies:** How will you, the research, connect, disseminate and communicate with the user group?

Most importantly, benefits of getting involved in GRIP not only accrue to the end-users. This list of 4 benefits to GRIP show insight into the outcome of dissemination for a research project:

1. **Continuous Improvement:** Evaluating the effectiveness of your GRIP strategies allows for the ability to make continuous improvements in the future.
2. **Paving the Way:** The process gains exposure not only for your project, but for future collaboration with outside parties.
3. **Relevance & Application:** Allows you to better understand your project's usability and real world application by communicating with users and farmers.
4. **Engagement:** Increases encounters with researchers, farmers, and users through networking with organizations such as LRIC. Allows for future collaboration between industry, academia and private parties.

What is not working?

The livestock sector in Ontario has been clear in their message that the current system is not as functional enough to meet their needs. Aside from the confusion of naming (e.g. KTT versus extension), the roles for each player involved are not clear. There is also a disparity in terms of resources and overall capacity among industry, academics, private sector, and public sector stakeholders. Improvement can only happen if all parties agree that change is needed followed with honest critical assessment of the current situation, where we need to be and how we can all work together to get there.

Ataharul Chowdhury, a professor at the University of Guelph, along with his colleagues Odame and Leeuwis (2014), researched the roles of public extension agency in Bangladesh to strengthen innovation. His findings suggested that obstacles in the agricultural extension agency are related to the linear (“top down”) paradigm of technology and knowledge transfer, and dependence on public service (Chowdhury et al., 2014). These findings show some insight into the current issues with GRIP in Ontario Agri-food.

However, a “top-down” approach is not the only challenge we face in Ontario. Increasingly, researchers have been asked to take a more active role getting their research into practice; a role that is not always possible, welcomed, or even understood. The accomplishment of having your research in practice is often an overlooked form of success, when it comes to traditional academic standards. Simply put, researchers are rarely rewarded for, or even expected to, ensure their research results are widely adopted. We cannot paint everyone with one brush. Some researchers are exceptional at this! Others however, have no interest, training, or resources for it. In these circumstances, we need other stakeholders to pick up the torch. However, whose responsibility this is, and who will pay for it, remain some of the unanswered questions. Industry can and has taken a more active role, but there are vast differences in the capacity (funding, organization, major vs minor species) of different livestock sectors (e.g. dairy versus sheep) to take on functions within a successful process. This has led to a rise in non-profit organizations and private advisory services. However, the former is often focused on specific sectors and/or topics, and often limited in resources. The latter provides tailored services, but GRIP is influenced by their awareness of research knowledge, specific service offerings; not to mention each advisor possesses a unique set of interests that influences what information is shared.

There most certainly is a demand for active stakeholders that are focused on improvement in evaluation methods, dissemination strategies, relationship building and facilitation of new innovation in GRIP. There are important questions that need to be asked and considerations that must be made when trying to understand how each major stakeholder group (i.e. industry, academia, public sector and private sector) can help achieve GRIP. For example:

- How involved are farmers supposed to be in disseminating new research?
- What return on investment is industry seeing from research if this dissemination system is not functioning well?
- What expectations do academics have for GRIP? Who is ensuring their follow-through with GRIP in research projects?
- Does the public sector have a responsibility to support and fund dissemination between groups?
- Should the private sector become more reliable to industry and academia for GRIP?

What can we do?

Australia faced similar challenges with GRIP as Ontario, however, with a series of changes to their system they have come out on the other side. With the addition of user-pay models, embracing new roles and facilitative services, support from the private sector and investment from the public, Australia's extension challenges were overcome (Coutts & Roberts, 2011). Coutts and Roberts' also stress the need for multiple models in extension to evaluate capacity building and cater to a wide variety of users (2011). Each research project is unique and may require a different model to successfully disseminate the knowledge and information.

Some of the key actions we need to consider for the Ontario livestock industry include (Roche, 2014):

- **Focusing on integrated GRIP strategies:** The process of GRIP starts before the project starts and is ongoing throughout the research and follows afterward
- **Capacity building:** From increased financial supports, to making use of facilitators and innovation brokers, to developing and offering more robust training and mentorship
- **Openness to divergent methods and practices:** GRIP is not one size fits all, patience and flexibility with new and different frameworks may be required. Most importantly, we must have increased scholarship on GRIP
- **Fostering critical relationships and networking:** Creating a network of people and organizations with relevant skills and insight improves relationships and aids dissemination
- **Developing private sector services and industry services:** Improving upon services and developing resources creates more effective collaboration

Do's and Don'ts of GRIP

Do Collaborate: You need to have working relationships with the relevant industry and truly tie into their systems, understand their needs and take their advice.

Do Use a Variety of Channels: Based on the target audience, a good approach will always involve several channels (written in a magazine, video, twitter, websites, etc... even better, on farm demonstration).

Do Remember the System: Every change, adaptation or new thing introduced at the farm level is being introduced into a system that was working pretty well before you got there. This is where understanding and acknowledgement of the holistic approach to farming is helpful!

Don't Stop at KTT: As we know KTT today, most would argue that it is only the first step of many needed to see widespread, lasting on-farm-change as a result of research. Those committed to making a difference need to think beyond simple dissemination and focus on more sustained engagement.

Don't Forget to Define Your Target Audience: Who benefits from your work? What are their characteristics? How do they prefer to receive new information? What is their current level of knowledge, attitude, and behaviour regarding this topic? Be strategic and considerate when choosing the medium(s) for information dissemination.

Don't Forget About Diversity: Within any target audience, there will be people that want the one point, those that want the one-page paper and the few that want it all (including links to research papers).

Don't Start When the Project is Over: Good GRIP happens throughout the project and is an iterative process... more than that, it starts BEFORE the project begins, as you design the research objectives, audience for results, etc.

Research Gaps

- Understanding adoption and GRIP as a process
- Understanding the Ontario context of GRIP
- Building GRIP capacity
- Improving collaboration between – industry, academics, public sector and private sector

Innovation Gaps

- Resources for publishing KTT works for public view
- Outcome evaluations shared to academics to improve future KTT



For more information

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Additional resources

Institute for Knowledge Mobilization
<http://www.knowledgemobilization.net/learning/>

Certificate in knowledge mobilization
<https://courses.opened.uoguelph.ca/public/category/courseCategoryCertificateProfile.do?method=load&certificateId=453705>

European Seminar on Extension and Education
<https://esee2021.ie/>

The Food and Agricultural Organization (FAO) of the United Nations
<http://www.fao.org/3/w5830e/w5830e03.htm>

Growing Knowledge Translation and Transfer (KTT) in Ontario
https://www.uoguelph.ca/alliance/system/files/Growing_KTT_in_Ontario_Manual_of_Best_Practices.pdf

University of Guelph KTT Services and Resources
<https://www.uoguelph.ca/alliance/KTT-services-and-resources>

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