RDAR
Results Driven Agriculture Research

Policy and Procedure

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1. Application of the Policy

a. This policy applies to all research activity funded by RDAR unless other written contract clauses stipulate otherwise and have been approved by RDAR's Chief Executive Officer or delegate and an authorized individual representing the Research Partners and / or Funders.

> For example, specific applied research projects that result in on-farm field and management protocols for direct producers' direct use, shall be available at no charge to Alberta producers.

b. This Intellectual Property and Commercialization (IPC) Policy is guided by RDAR's mandate to target strategic investments in producer-led, results-driven agriculture research, which powers the competitiveness, profitability, productivity, and sustainability of Agriculture in Alberta.

c. RDAR's IPC Policy supports facilitating relationships that bring an invention to practice – which is imperative for RDAR-funded research.

d. The IPC Policy requires that Research Partners and Funders establish Intellectual Property (IP) agreements, IP ownership, and IP access and usage rights **before funds are released.**

e. The IPC Policy encourages and supports Research Partnerships, including for-profit industry and non-profit organizations, with financial and / or intellectual contributions and / or other resources to advance innovation.

f. The IPC will favour economic returns on investment

   i. The first right to file for IP protection will be with the Research Partners.

   ii. Should the Research Partners not file for IP protection, RDAR (and optionally other Funders) reserves the right to require IP to be assigned to RDAR to file for IP protection.

      The intention is to secure freedom to operate and to avoid third-party replication and patenting that would restrict the use of the IP for the benefit of Alberta.

   iii. Should IP protection not be filed by Research Partners or Funders, RDAR encourages publication and the making of *enabling public disclosures* to establish future freedom to operate.

g. See Appendix: Section 15 Definitions for a glossary of terms used in this policy.

2. Preamble

a. The RDAR *IP and Commercialization Policy* seeks to align with RDAR's mandate to support results-driven agriculture research priorities and programs that will increase the competitiveness and profitability of Alberta's agriculture industry. It establishes guidelines and recommendations for RDAR staff, Grantees, and Funding Partners regarding Intellectual Property that may arise from RDAR's programs.

b. Efforts to increase and communicate knowledge are at the heart of academic endeavours, and RDAR supports research extension to deliver tools into the hands of producers.

c. "Intellectual Property" (IP) means different things to different people in different contexts and environments. For example, in a legal sense, the emphasis is on ownership; in this context, IP is concerned with patents, copyrights, trademarks and the like, all of which provide legal protection for something with actual or potential commercial value.

   Common law and certain statutes and acts (e.g., Canadian Patent and Copyright Acts) are the legal means by which IP is defined and through which IP rights can be protected.

d. A strictly legal framework for and approach to IP rights, based closely on copyright, patent and the like, is not sufficient within an academic community where the emphasis is on the word "intellectual."

   An academic community values openness, sharing of ideas, and scholarly activity, and its primary goals are to increase and disseminate knowledge.

   Commercial considerations, as well as potential academic recognition, can influence decisions to share ideas and results with one's colleagues.

   While recognizing that such tensions can exist, RDAR encourages an atmosphere of openness to the greatest practical degree.

e. Research endeavours may result in the creation of IP with rights conferred by statute and common law in Canada, and which may be eligible for rights in other countries and under international treaties.

Within the academic community, it is essential to ensure that IP rights are properly conferred on all those responsible for developing and commercializing IP while at the same time encouraging the openness and free exchange of ideas that are essential to successful scholarship.

This policy requires the contribution of all parties to be appropriately recognized.

f. Except in certain well-defined situations, this policy provides that the ownership of IP rights rests with the creator(s) of the IP.

Because of the complex interactions of members of an academic institution in the course of their work, a chief difficulty in implementing such a policy lies in identifying the creator(s), and in determining who should share in any benefits resulting from IP.

A substantial part of this policy is concerned with setting out the principles and procedures to be used in such determinations.

However, a critical need that cannot be imposed by policy is the requirement for all parties to discuss and negotiate issues with professionalism and in good faith

3. Statement of Principles

a. Results-Driven Research

i. Research performed with RDAR funding will have measurable benefits for producers and agriculture in Alberta.

b. Ownership of Intellectual Property

i. Except as stipulated below, RDAR policy is that the creator (s) own the rights to IP created in the course of research activities.

ii. The exceptions are:

- In academic institutions, in which the institute's IP policies govern IP rights.
- In Partnered Research activities, ownership of IP rights may be determined in whole or in part by the partners' regulations or the terms of the research contract.

  The Principal Investigator, the leader of the research project, must inform participants in these Partnered Research of any stipulations of the contract.
- RDAR and / or another Funder is assigned ownership of IP rights.

4. Guidelines

a. RDAR-funded research should be focused on questions that address problems or opportunities for Alberta agriculture.

In addition, preference will be given to the translation of research results into solutions that increase the competitiveness, profitability, productivity and sustainability of Alberta's producers and agriculture industry.

RDAR has a flexible and inclusive approach to research funding that reflects the diverse nature of the Canadian agricultural industry, Canadian Producers, and their Academic Partners.

RDAR will give preference to research projects that include Industry Partners who serve as Research Partners and who collaborate in the planning and funding of the research as well as delivering a path to Commercialization and the use of the IP on Alberta farms.

5. **Benefits to Alberta Producers and Canadian Agriculture**

    a. Research proposals must communicate the potential benefits to Alberta producers and Canadian agriculture.

        i. Proposals will include documentation of the prospective economic, environmental, social or other tangible benefits to producers and the estimated commercial value for the Industry Partner(s).

6. **Industry Partnerships**

    a. Applicants are expected to describe a path to Commercialization or broad dissemination of results to producers.

        i. Given RDAR's objective, applicants are encouraged to seek an Industry Partner(s) with operations in Canada that can contribute financially (in-kind and / or cash) and intellectually (research and / or market knowledge).

        ii. Industry Partners are expected to be capable of translating the research outcomes into economic returns from the marketplace and supporting go-to-market activities.

        iii. Industry Partners may range from for-profit companies to non-profit organizations.

        iv. If an applicant is unfamiliar with the Canadian agricultural industry, RDAR may provide links to industry agricultural organizations that may lead to effective Research Partners.

7. **Intellectual Property (IP) Protection and IP Rights**

    a. Before applying for funding, grant applicants must perform a preliminary search for any pre-existing IP (prior art) related to the research.

        Pre-existing IP will be disclosed in the Research Plan, and copies of relevant materials will be made available to RDAR.

    b. To safeguard discoveries and speed the path to Commercialization, **RDAR will require Grantees to articulate an IP Protection Plan** regarding how arising IP from the research will be protected and maintained and who is responsible for executing the plan.

    c. An **IP Protection Plan** between academic and Industry Partners regarding ownership and licensing of IP will be considered an advantage in the selection process.

    d. If a research project is co-funded with an Industry Partner but without an IP Protection Plan between the parties, the Grantee is encouraged to revise the project plan to include an IP Protection Plan before the research project commences.

    e. Should the Grantee fail to follow the IP Protection Plan, RDAR reserves the right to pursue IP protection with assistance from the Grantee (s) as needed.

    f. Where innovations arising from the research are not protectable, the Grantee will describe **a Knowledge Transfer Plan** to effectively disseminate innovations to the Alberta agriculture industry.

8. Confidentiality

a. All confidential Existing IP and all Arising IP will be respected and maintained as confidential by all Research Partners and Funders.

b. All proprietary data, including commercially sensitive information, potentially valuable results or ideas, will be protected from unauthorized, inadvertent, or untimely disclosure.

c. Publication of research results should not interfere with any of the Research Partners' IP rights or disclose a partner's proprietary information without the partner's express permission to allow publication and public disclosure.

9. Publication and Data Sharing

a. Research project results will be kept secret beyond an agreed reasonable time necessary to complete the research and complete the IP protection plan.

i. The Grantee must allow other partners to review proposed publications before publication.

The Grantee will give the Research Partners a fair and reasonable amount of time to pursue IP protection if possible and suggest changes to publications that preserve IP. During this time, all details of the research will be kept confidential.

ii. If student training is part of the research project, Research Partners will not delay the student's academic progression, e.g., thesis defence. A thesis may be held as confidential until IP Rights are secured and publication made only after the IP Rights are secured.

iii. Peer-reviewed publications, results and resource sharing through white papers and producer information sources, e.g., beneficial management practices, are important to research projects funded by RDAR.

iv. RDAR requires publications to be made freely accessible online in a central or institutional repository as soon as possible after the publication date and after IP is protected.

10. Ownership of IP

a. RDAR’s policy is that ownership of IP rights created during research activities belongs to the creator(s).

b. Research Agreements and / or contracts between the Research Partners must include an IP Protection Plan arising from the research.

c. In cases where Grantees are unable to follow the IP Protection Plan or maintain IP arising from the research, any arising IP will be reported to RDAR before any public disclosure.

d. RDAR claims no immediate IP Rights associated with a research project.

e. In instances where Research Partners do not intend to or are not able to protect IP and where leaving IP unprotected would result in the loss of commercial opportunity or result in risks to producers' freedom to use the results of the RDAR-funded research, **RDAR has the first option to negotiate IP assignment.**

f. In the case that RDAR is assigned IP Rights, RDAR will seek out a suitable partner to commercialize the research and make the research results available to benefit Alberta producers.

11. Licensing of IP by Grantee

a. When Industry Partners co-sponsor research, research agreements between parties can become stalled in negotiating IP ownership and licensing.

b. RDAR recommends that the Industry Partner be given the first right to negotiate an exclusive or non-exclusive license to enable a smoother path to market and encourage more straightforward negotiation between parties. In some cases, the Industry Partner could negotiate a non-exclusive, royalty-free (NERF) license in exchange for supporting the costs of IP protection and / or support for follow-up research.

c. If the Grantee has not successfully commercialized, assigned or licensed the Arising IP within three (3) years from official project completion, the Grantee will submit a renewed Commercialization Strategy to RDAR for review and comment.

> At this point, RDAR will have the first option to negotiate for ownership and reassign any IP resulting from the project, as described in Section 10.

d. Should RDAR forego the option to negotiate for ownership of IP, and if warranted, the Grantee may be encouraged to apply for additional RDAR funding to continue developing the Arising IP.

12. Commercialization

a. A Commercialization Plan is an integral part of grant applications.

i. The path from early-stage research ideas to Commercialization can be long, difficult, and unpredictable.

ii. Significant additional late-stage investments and market knowledge are required for successful Commercialization. It is rare for researchers to succeed in this journey on their own.

iii. Commercialization of late-stage research is benefitted by agreed and precise arrangements for licensing the IP to an Industry Partner(s). These details are to be included in the Commercialization Plan.

b. To avoid RDAR-funded innovation stalling on the way to market, applicants will be highly encouraged to seek a partner with the potential to commercialize or advance the research results to improve the competitiveness, profitability, productivity and / or sustainability of Alberta's agriculture producers and agriculture industry.

13. Patent and Intellectual Property Protection Costs

a. Patent and IP protection costs are eligible expenses under Sustainable CAP and, by extension, the Alberta Agriculture and Irrigation Funding Agreement.

b. Since RDAR requires patents to be fully commercialized, support of patent costs will only be considered after a proof of concept is proven and the Commercialization Plan in fully developed with partners in place.

14. Open Innovation Networks

a. Early-stage research often follows a long and uncertain path to application and Commercialization. Therefore, allowance will be made to support research that is not expected to yield useful IP nor have an obvious commercialization path but may provide long-term benefits for the agricultural industry (e.g. environmental and consumer benefits).

b. To support early-stage research in high-value research areas, RDAR will consider projects that are part of an open-innovation network in targeted areas of interest.

c. Under the terms of an Open Innovation Network, there is an absolute requirement to disclose results and make results available to others without charge or other access barrier.

15. Additional Guidance

a. Intellectual Property:

i. Executing a signed research agreement before commencing a Research Project is a best practice for IP management.

The ownership and protection of IP generated in collaborative Research Partnerships should be carried out according to the IP Policy described above.

Participants are counselled to discuss intellectual property issues at the earliest stages in developing a Research Partnership.

ii. Academic Partners often have specific policies regarding IP ownership arising from research carried out at the institution.

These policies usually apply to faculty, students, post-doctoral fellows and staff involved in the research, and they must be consistent with the collective agreement between the institution and its faculty.

iii. While Academic Partner's institutional IP policies may differ with respect to ownership, obligation to disclose, royalty-sharing and conflict of interest, they have a common mandate to facilitate the transfer and Commercialization of IP wherever appropriate.

In addition to the academic policy, other factors that influence IP ownership include intellectual contributions, financial and in-kind contributions, existing (background) IP and conventions within the field of research.

iv. IP arising during a research project can be owned by either one Research Partner or a combination of the Research Partners involved in and / or supporting the research, depending on the policies of the academic institutions and / or research agreements in place.

v. Access to the research results may fall under any one of the following cases, depending on the research agreement put in place: open dissemination with no restrictions, non-exclusive licensing, exclusive licensing, joint ownership, partial assignment of ownership, or full assignment of ownership.

b. Research Partnerships:

i. Whether research by an Academic Partner is carried out in collaboration with industry and / or other Non-Academic Partners, a Research Agreement must be executed before the start of the project.

The Research Agreement covers matters relating to intellectual property, including each party's rights to ownership and / or access to any IP generated by the project, how the IP will be protected and disseminated, and the impact of IP on publication, confidentiality and liability.

ii. Individual academic institutions and Industry Partners often have specific requirements.

An Academic Partner's Industry Liaison Office or equivalent can often provide advice and services to facilitate the protection, development, transfer and Commercialization of IP, including the development of the research agreement and negotiation of the terms of the agreement. The industry liaison office should be consulted at the outset.

c. Guidance for the Academic Partner:

i. The goals and issues of an Industry Partner are often different from those of the Academic Partner.

The Industry Partner's underlying goal is to provide value to investors and stakeholders.

The Industry Partner will often seek to obtain a competitive advantage from the research collaboration for as long as possible.

ii. Usually, the Industry Partner will integrate results from many different internal and external sources to address a problem or create a new product, and results from an academic research project may only provide one component of a solution. Academic research discoveries may represent only a portion of the cost of bringing a new product or service to market. The cost and risk of launching a new product can be extensive relative to the cost of the initial research.

iii. The significance of the Industry Partner's Background IP and the extent of their contribution to the research collaboration, both at the outset and during the execution of the research, should be recognized. There is a sense of urgency in business, particularly in small and medium enterprises (SMEs), and timelines are often much shorter in industry than in the research setting. Project management and quality standards are more rigorously managed in industry. Timelines may make some projects unsuitable for an industry collaboration.

iv. There are different cultures and approaches to handling information within academia and industry. Academic researchers want to submit journal articles relating to their research as quickly as possible and often on short notice. Some Industry Partners will want to maintain the confidentiality of the research results for as long as possible; others want to maintain the confidentiality of the research outcomes until IP Protection is perfected, e.g., by filing a patent application.

v. SMEs often protect their formula, process, design, instrument, or data as trade secrets.

vi. The requirement for confidentiality of research results should be discussed early in the process to identify whether a collaboration can take place or if significant differences exist that may not be able to be dealt with during the balance of the negotiation process.

d. Guidance for the Industry Partner:

i. Academic collaborations can benefit the Industry Partner by generating innovative ideas and important research results, validating the science, and / or explaining the science behind the technology.

In addition, collaboration can provide access to potential employees—partners often hire graduates to be involved in a collaborative project.

It is also the case that industry may be more advanced in certain areas than academia.

Academic researchers should see Industry Partners as a valuable, up-to-date source of knowledge and wisdom that should be consulted throughout the project.

ii. Due to conflicting needs, not all industry-sponsored research is appropriate for collaborative research involving graduate student training.

For example, research projects that focus on applying existing technology or require routine data collection and analysis are unsuitable for projects that include student training.

The Industry Partner needs to be aware of the significant differences between industry and academic research, the concerns and issues of the academic researchers, and the policies of the academic institution where the collaboration is taking place.

iii. The goal of the academic researcher is to develop and disseminate new knowledge and to educate. Academic tenure, promotion, and grant funding decisions are strongly influenced by the number and impact of the researcher's publications in the scientific literature.

iv. Students and post-doctoral fellows carry out much of the research conducted by the Academic Partners.

The participation of students and post-doctoral fellows in academic research projects will impact the structure and timeline of a project.

Recruiting students and post-doctoral fellows to work on the research may delay the start of the project.

Students must take courses and meet other academic requirements, which can affect the progress of the research.

Students need projects that involve a challenging academic research question rather than only product developmental activities, and since their graduate studies cover several years, short-term projects may not be suitable.

Students may be required to defend their thesis, and all theses will eventually be published by being sent to the academic library and deposited with the National Library of Canada.

e. Academic institutions across Canada have different policies regarding IP ownership (owned by the Academic Partner, Industry Partner, or a combination).

   Industry Partners may find this an added complexity when working with different institutions.

   These policies are based on the institution's policies and collective agreements with the faculty. Not all faculty members have exclusive IP Rights and IP access, and commercialization rights may need to be negotiated with the Academic Institution.

   Industry Partners are advised to ascertain the specific Academic Institution's IP policies and, ideally, secure IP Rights before the Research Project starts.

Appendix

Definitions

f. An "Invention" means a novel, creative, original, and useful solution to a problem.
   i. Inventions can take various forms, including novel devices, processes, or products.
   ii. Inventions can encompass physical creations and knowledge, such as innovative methods, techniques, or insights that contribute to progress and understanding in various fields.
   iii. Inventions may be protected through patents, trademarks, trade secrets, and plant breeder's rights.

g. "Inventor" generally means anyone who contributes to the formulation and ultimate expression or reduction to practices of an invention (IP) is likely a proper inventor, although each case must be determined separately.

   Simply following instructions is not sufficient to make one an inventor.

h. "Intellectual Property (IP)" means knowledge and created works where ownership or a right to use may be legally protected.
   i. IP includes proprietary and / or technical information and knowledge, including scientific and technical discoveries and any knowledge in a form that is valuable, has demonstrated utility, is transferable, and may be protected by law.
   ii. IP can be legally protected through various mechanisms, including patents, copyrights, trademarks, trade secrets, industrial designs and plant breeders' rights.
   iii. An idea in itself is not IP. To become intellectual property, the idea needs to have been turned into something expressed in a legally defined way.

i. "IP Rights" rights are *personal rights* that enable the person who holds them to do something, such as excluding others from practicing or using the IP.
   i. IP Rights themselves are distinct from the IP that gives rise to them.
   ii. IP Rights may be assigned to a third party through formal assignment, license, or other legal instrument.

j. "Commercialization" means introducing and delivering the IP generated during an RDAR-supported project into practice.
   i. Commercialization includes the complete lifecycle of a technology from the ideation through the launch of a product or technology to its broad adoption and operational use.
   ii. The stage of Commercialization may be expressed on the Technology Readiness Level (TRL).

k. "Principle Investigator" means the leader of the research project, who, together with the other research team members, monitors and reports progress and outcomes to the Funders.

l. "Industry Partner" means a Canadian private or public organization (including government ministries) interested in partnering and co-sponsoring the research and committed to delivering the invention to Alberta producers and other agriculture value chain members using Alberta farm products.

i. The Industry Partner may be a corporation, cooperative, partnership, association, or other legal entity that provides knowledge, funding, and resources to the project.

ii. The Industry Partner will be consulted throughout the project.

iii. Industry Partners funding may be in the form of cash and defined in-kind contributions with a clear economic value.

iv. Industry Partners will have the first option of using the research outcomes and shall have the right to use the Intellectual Property.

m. "Academic Partner" means an academic organization engaged in the performance of the research project. The Research Partner will most often be an accredited post-secondary academic institution or research institute that has the capabilities to carry out the proposed research and actively collaborate with the Industry Partner(s).

n. "Producer Partner" means a primary agricultural producer, group of producers, or commission who identifies research needs and contributes to the validation of approaches on an ongoing basis.

o. "Research Partners" embodies Transdisciplinary Producer, Private, Public Partnerships (T4P) and means industry, academic, and producer partners who collaborate and accept responsibility for creating and submitting an RDAR funding application, managing the project, and reporting the research.

    The Research Partners set objectives and milestones, interpret results, protect emerging IP, and translate research outcomes into useable innovations.

p. "Grantee" means the lead organization that submits the research application and receives research funding from RDAR.

q. "Research Agreement" means a legal agreement between Research Partners that stipulates, among other details, cash and / or in-kind contributions, confidentiality, publication policy, IP ownership and the IP protection plan.

r. "IP Protection Plan" means the documentation of the strategy that the Grantee (s) will follow to protect and maintain IP arising from the project before public disclosures (e.g. publications or conference presentations.

s. "IP Filing" means the process required to secure the IP rights to arising IP.

    IP processes include securing trade secrets, filing costs for provisional or non-provisional patent applications, and national patent or trademark filings – and the costs for IP filing.

t. "IP Maintenance" means the process required to maintain the value of arising IP. This includes the continued confidentiality of trade secrets, filing of provisional or non-provisional patent applications, national patent or trademark filings and payment of maintenance costs for granted patents or trademarks.

u. "Existing IP" or "Background IP" means IP developed before the start of a project. It often includes existing testing methods, procedures, models, tools, know-how, etc.

    Existing IP can be any form of IP, whether protectable or not.

v. "Arising IP or "Foreground IP" means the IP generated during an RDAR-funded project.

    Arising IP typically includes the project outcomes but may consist of anything created using project funding or resources.

w. "Commercialization Strategy" means ensuring that research results are put into practice. The Commercialization Strategy will include identifying persons or corporations responsible for planning and performing specific activities, identifying the funding sources, marketing approaches, stakeholder communication, etc.

x. "Patents" means the IP that provides the legal right to exclude others from making, using, or selling an invention for a limited period of years in exchange for publishing.

    i. A patent filing enables inventors to make public disclosure of the invention.

    ii. In most countries, patent rights fall under private law and the patent holder must sue someone infringing the patent to enforce their rights.

    iii. Patents can provide an essential advantage in highly competitive fields.

y. "Trade Secret" means the form of IP that loses its value when revealed or if it is independently created or reverse-engineered.

    i. Canadian courts have not adopted a uniform definition of 'trade secrets' or confidential information.

    ii. Some trade secrets may be patentable inventions, while others are not.

    iii. Unlike a patent, a trade secret is a non-registerable form of IP.

z. "Copyright" means the exclusive right to produce, reproduce and publish an original work of authorship (e.g. a technical report, manuscript, presentation slide), artistic work (e.g. technical drawings, photos, videos, artists renderings), software code, etc. By law, copyright protection vests with the author automatically as soon as the work is created.

aa. "Trademark" means a type of intellectual property consisting of a recognizable sign, design, or expression which identifies products or services of a particular source from those of others.