



## **Strategic Plan 2019 – 2024**

**Canadian Feed Research Centre**  
Department of Animal and Poultry Science  
University of Saskatchewan



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## **Executive Summary**

Since its official opening in October 2014, the Canadian Feed Research Centre (CFRC) has been providing feed research services to academia and industry. A team comprised of University of Saskatchewan professors, research staff, technical operators and students is employed to ensure the success of the organization as a resource to the national and global feed industries. Operating as a University of Saskatchewan facility and under the guidance from key operational and advisory committees, the CFRC has established itself as a valuable resource to the feed industry in addressing a wide range of research priorities and requests.

This globally unique facility contains an impressive lineup of processing equipment and monitoring systems which allow for intensive research to be conducted. Furthermore, the benefit of housing three different processing lines under one roof enables scaling up of feed processing from bench-top activities to pilot capacity to commercial volumes. A wide range of expertise from CFRC representatives compliments the robust equipment inventory in order to encompass aspects of ingredient storage and handling, particle size reducing, mixing, hydrothermal processing, and the physical and chemical evaluation of final feeds.

Recognition of the facility to industry has been growing, although efforts to amplify our exposure through marketing are currently underway. Furthermore, experience with the equipment operation at the CFRC is building and has resulted in improved efficiencies through daily activities, granted that additional advances are always possible. Several students have taken advantage of training opportunities at the CFRC related to feed manufacturing, while industry groups have collaborated with CFRC representatives to provide training workshops for new and existing feed industry employees. Training represents a key area moving forward for the facility with new programs currently in development.

The Strategic Plan provided herein is the first to be developed since the CFRC's official opening. While there have been significant research activities undertaken at the facility since its completion, a Strategic Plan is necessary in order to ensure future success and sustainability. Four priority areas have been highlighted and are central to the establishment of our strategic framework: 1) operations, 2) research, 3) marketing and 4) education. The following document outlines the CFRC's mission going forward while describing objectives and anticipated outcomes that will lead to the realization of our vision.

## **Organizational Background**

The CFRC is a feed research facility owned by the University of Saskatchewan and located in North Battleford, SK. This research mill is globally unique in allowing for specific feed manufacturing processes using three scales of operations: a laboratory-scale line for preliminary testing of small quantities; a pilot-scale line where concepts are scaled-up for testing to approximately two tonnes per hour capacity; and an industrial-scale line that is reflective of a typical feed mill found in the Canadian Feed Industry. The CFRC currently caters to a wide range of clients consisting of University of Saskatchewan researchers, external academia groups, industrial feed manufacturers, feed supplement manufacturers and commodity groups, among others. Our facility is HACCP certified through the ANAC Feed Assure program and is registered with the FDA as an approved facility for the import and export of feed products. The CFRC employs two full time workers with casual worker assistance obtained when needed. Furthermore, the Feeds Innovation Institute (FII) operates as the contract research service of the CFRC.

Specifically, FII is a research and development service dedicated to capturing economic opportunities in the animal feed value chain, and mandated to draw together a wide cross section of scientific disciplines and industry interests focused on feed product development. It brings together three stakeholder groups – the U of S, the Saskatchewan Ministry of Agriculture, and the feed and livestock industry – to provide industry acumen, research and development capability, proactive solutions, organization development, an extensive resource and a knowledge base to capture opportunities in an increasingly sophisticated and demanding animal feedstuffs world market. Specific areas of expertise for FII include nutritional chemistry (in-house laboratory facility), animal feed development and evaluation, product development, feed processing, CFIA feed registration and regulatory advisement. The clientele which FII serves varies from startup feed ingredient companies and commercial feed manufacturers up to national commodity groups and multinational feed and commodity organizations. There are two permanent employees working within FII with casual and contracted workers hired on an as-needed basis.

### **Vision:**

Through education, research and development services, the CFRC strives to provide value to all aspects of the feed industry value chain.

### **Mission Statement:**

The CFRC will be a global leader serving the crop-food-feed value chain through innovation and development of feed products and feed processing technology to promote environmental, social and economic sustainability.

Additionally, the CFRC will serve as a resource for academia, industry, government and consumers to improve feed industry awareness and safety, enhance knowledge and develop leaders to support Saskatchewan and Canadian agriculture.

## CFRC Committee Structures and Participants

**International Research Committee** – gives strategic input into the CFRC research programs. The Committee to be comprised of international representatives of research feed mills and feed manufacturing programs. Committee to be established in 2013.

**Research Management Committee** – oversees the direction of research at the CFRC, receives requests for use of the CFRC, determines suitability of the facility for described research and handles scheduling. Comprised of staff from the University of Saskatchewan, Department of Animal and Poultry Science and the Feeds Innovation Institute.

**Operations Committee** – ensures the smooth day-to-day management of operations with respect to the use of the ISL by the licensee; comprised of the operational manager from Cargill Animal Nutrition and the CFRC Manager from the University of Saskatchewan.

**Industry Advisory Committee** – ensures clear communication among industry stakeholders, the University and governments. This group provides input into the directions and activities of the FII, Strategic Research Program Feed Chair, Feed Processing Chair and Feed Industry Liaison, and brings key industry issues to the attention of government and University. Comprised of private companies and selected representatives (government and commodity organizations) that can contribute to the success of the FII, the committee meets biannually and is chaired by an industry representative.

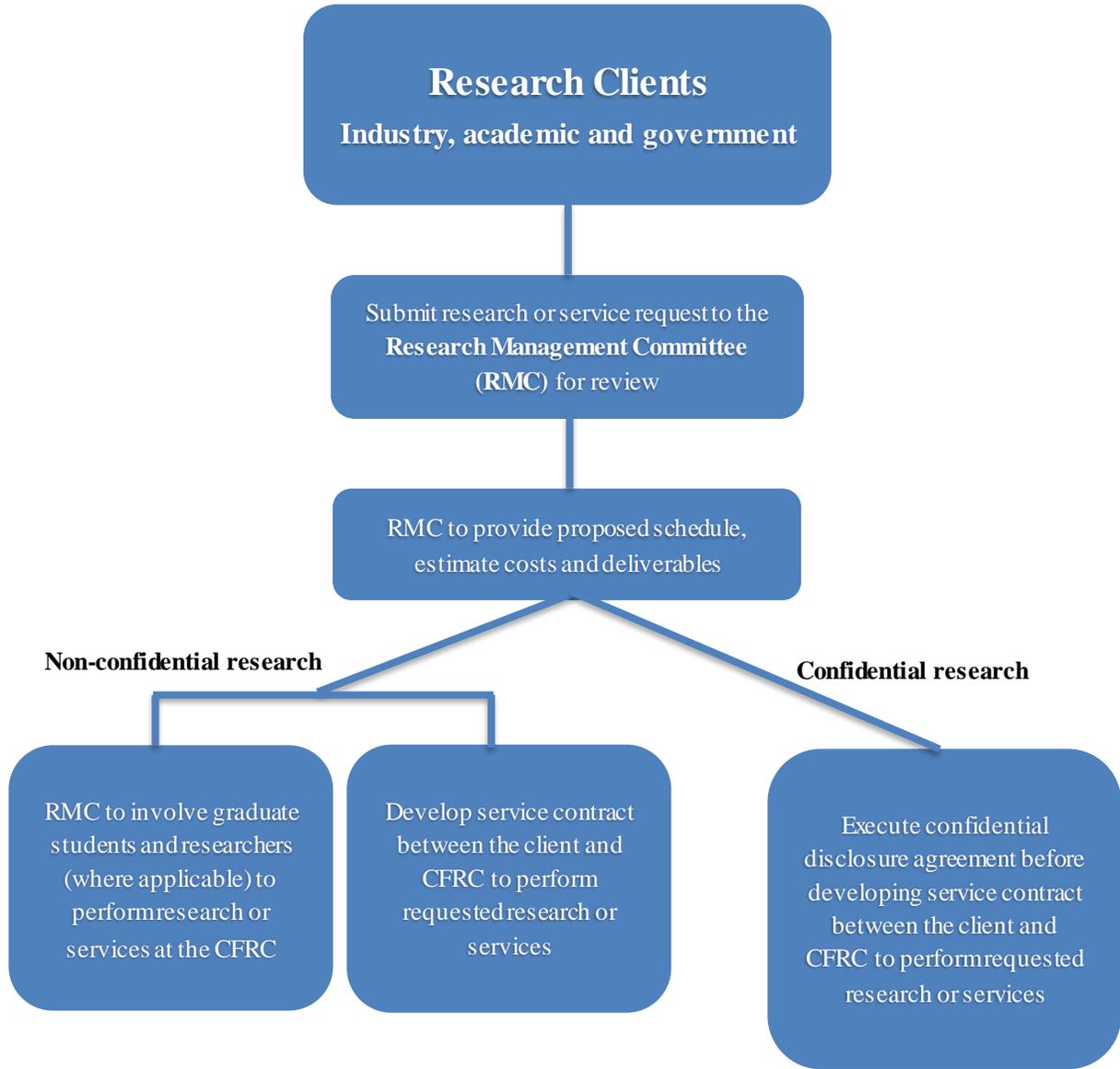


## CFRC Strategic Priorities

The CFRC strategic planning committee has identified four strategic priority areas, each of which contribute to a set of goals that will guide us towards realizing our vision. Successful execution of the CFRC mission will be possible by focusing on these priorities when considering current and future activities.

Priority Area	Outcome	Tactics	Evaluation
Operations	Conduct precision manufacturing of research diets	Installation of equipment and control software to improve batching accuracy	Improve accuracy of ISL batching scale to maximum threshold of $\pm 5$ kg
	Grow current client base	Promote the CFRC at identified key events where awareness of CFRC would benefit	Attend minimum of three new industry/research events annually
		Discuss recognition with APS researchers for future publications	Recognition is given for each published thesis/manuscript where feed/services were completed at CFRC
	Achieve and maintain fiscal sustainability	Review current user rates, identify production inefficiencies and implement an optimization plan	Annual operating statements reflect at least break even financials
Research	Facilitate industry engagement to ensure relevance of research and education programs	Maintain dialogue with industry through advisory meetings. Present research at industry-relevant events. Schedule one-on-one meetings with industry groups	Review of current and proposed research during Industry Advisory meetings in order to gain input regarding relevancy
	Develop innovative processing solutions	Collaborate with Feed Research Chairs to identify and evaluate novel and relevant feed processing strategies	Summarize completed feed processing research to present at industry conferences (summer 2019)
Marketing	Expand regulatory approval services	Identify and take part in workshops associated with FDA and EU feed regulations	Production of an internal guidance document with clear regulatory requirements tailored to clients based on submission type by March 2019
	Develop technical and operational training programs for plant employees	Engage in direct discussions with companies to assess interest and requirements, use platform at events to inform industry of training capacity	Area-specific feed industry training programs developed and ready for participants by May 2019
Education	Expand on training of HQP (students and continuing education)	Gather feedback from participants who have already received training at CFRC, use this information to build a student/intern training program	Develop, coordinate and implement CFRC internship program by May 2019
	Develop curriculum over time to accommodate general manufacturing or client-specific training	Use existing educational resources and other industry training program examples to build a module-based curriculum for industry/academia	Develop, coordinate and implement a base feed manufacturing training course by July 2019

# Accessing CFRC Services and Expertise



- CFRC List of Services:**
- Feed processing
  - Product development and evaluation
  - Nutritional chemistry
  - CFIA regulatory advisement
  - Project management
  - Technical advisement of operations
  - Bespoke training for clients

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