



Canadian Poultry
Research Council

Le Conseil De
Recherches Avicoles
Du Canada

Call for 2017 Letters of Intent (LOI)

December 2016

Dear applicant: Please note that the Canadian Poultry Research Council (CPRC) will continue the approach to the grant review process adopted for the 2016 call designed to provide more flexibility and efficiency to both CPRC and the research community. The approach is designed to reduce the time required to make funding decisions while ensuring CPRC and its member organizations support research that meets industry needs. The approach, compared to the LOI form used previously, consists of:

- *An expanded LOI that requests:
 - *More detailed and additional information on project objectives and background.*
 - *More detailed description and explanation of the proposed research and methodology.**
- *LOIs will be reviewed initially by CPRC and its member organizations with a major focus on industry priority and impact. Those projects that are of strong interest to CPRC and its member organizations will move to the peer review stage.*
- *Principal investigators will be provided the opportunity to respond to peer review comments.*
- *CPRC reserves the option to request additional information, such as a detailed work plan and methodology, expansion of knowledge transfer activities, etc.*

CPRC made changes for the 2016 call and will maintain these changes for the 2017 call. The research categories previously used were unable to accommodate some new initiatives in poultry research (i.e.: climate change, smart agriculture, precision agriculture). The CPRC Board of Directors decided that the ad hoc category that was originally designed to fill these gaps was not as effective as it has been in the past. The Board established a three-category approach for the 2016 call designed to accommodate both ongoing research issues and respond to evolving areas of research. Specific priority areas and desired research outcomes, most included in the 2012 National Research Strategy for Canada's Poultry Sector (http://cp-rc.ca/wp-content/uploads/2016/02/National_Research_Strategy_for_Cdn_Poultry_Sector.pdf), have been identified within the categories. The 2017 call for LOIs encompasses the three categories and their priorities that are identified below. Research priorities specific to CPRC member organizations are listed by organization at the end of this document.

Please refer to the 'Notes to Applicants' section of this document for details, including submission deadline. LOIs are due February 3, 2017.

Research Categories and Priorities – 2017 Call

Food Safety

Research Priorities Included in Category

- Food Safety
- Economic Viability
- Animal Health Products

- Genetics/Genomics
- Smart Agriculture (Not in 2012 Strategy)

Poultry Health and Welfare

Research Priorities Included in Category

- Poultry Health
- Poultry Welfare
- Economic Viability
- Genetics/Genomics
- Animal Health Products
- Smart Agriculture (Not in 2012 Strategy)

Productivity and Sustainability

Research Priorities Included in Category

- Food Security and Affordability
- Economic Viability
- Environment
- Functional and Innovative Poultry Products
- Poultry Feedstuffs
- Genetics/Genomics
- Animal Health Products
- Smart Agriculture (Not in 2012 Strategy)
- Precision Agriculture (Not in 2012 Strategy)
- Climate Change (Not in 2012 Strategy)

Examples of previously funded projects, grouped by the pre-2017 research categories, are available on the CPRC website (www.cp-rc.ca) at the Programs section.

Notes for Applicants:

Industry review of Letters of Intent (LOIs)

Please use the CPRC LOI form for your submission for both the CPRC call and CFC RFP.

Instructions on completing the form are included in that document.

Please email your completed LOI in **Word** format to info@cp-rc.ca by 5:00 pm EST **February 3, 2017**.

If you do not receive email confirmation of your submission within two business days, contact the CPRC office.

If your completed LOI does not already include a signature, please also forward a signed electronic scan with a signature to info@cp-rc.ca or hard copy to:

Canadian Poultry Research Council
350 Sparks Street
Suite 1007
Ottawa, ON K1R 7S8

Your electronic submission is due February 3, 2017, however signed hard copies need not arrive by that date.

Budget

Applicants should limit their requests from CPRC to a maximum total of \$60,000 per investigator. Collaboration among multiple investigators working towards a common objective(s) is encouraged. Budgets exceeding \$60,000 per investigator should be discussed with the CPRC office before submitting an application for evaluation.

Industry dollars, whether from CPRC or other industry sources, must be matched with non-industry dollars at a ratio of at least 1:1. Higher leverage ratios are preferred.

Review process

LOIs will be reviewed on the following criteria:

- **Scientific concept and approach:** The proposal must be scientifically sound, technically feasible, and promise either to generate new knowledge or to apply existing knowledge in an innovative manner.
- **Industry impact:** The proposal must identify how the work will benefit the poultry industry, especially in terms of helping industry reach its research target outcomes, and should outline any additional potential social and/or economic benefits that will be realized in Canada.
- **Knowledge transfer and commercialization:** The proposal should describe how outcomes of the work will be shared with the research community and how it might be utilized by industry, including suggestions on how the resulting technology might be commercialized.

Collaboration among scientists and institutions is encouraged and will be a consideration during the review process.

All applicants will be informed of the CPRC Board decision to accept or reject the LOI after each of the internal and peer review steps identified above.

Future Calls

With input from academe, government and industry, the CPRC will continually review its research priority list and, if necessary, adjust it to reflect existing and emerging issues of importance to its members. Provided they remain of high importance, individual priority areas will be the subject of future LOI calls at regular intervals so as to promote continuity in existing research programs.

Questions?

Inquiries regarding this call for Grant Applications should be directed to Dr. Bruce Roberts via email at bruce.roberts@cp-rc.ca or phone at 613-566-5916

CPRC MEMBER PRIORITY LISTS

As additional information, please see the following research priority lists from each of the CPRC Members.

Canadian Hatching Egg Producers

1. Production-based Research
 - a. Methods to increase fertility
 - Differences in fertility and paid hatch
 - When is it most beneficial to add spiking roosters?
 - b. Egg size
 - The ability to be able to set eggs below 52 grams if required
 - Effect of maximum protein on egg size
 - Causes of egg weight differences

2. Breeder Welfare
 - a. Stocking density
 - Feeder space and water space
 - Focusing either on a per kg basis or detailed age categories
 - b. Euthanasia
 - Methods for birds < 3kg, including low atmospheric pressure stunning (LAPS)
 - Is LAPS practical for on farm application?
 - Efficient and quick way to euthanize breeder flocks in an emergency situation
 - c. Feed energy and male aggression
 - d. Early mortality of breeder hens (E.coli, staphylococci)
 - E.coli and staphylococci more likely to post peak mortality association
 - e. Feather pecking and licking problems
 - Link between feather licking and wheat based diets
 - f. Ammonia control
 - Control ammonia via barn ventilation, barn design, structural and equipment changes, and additives (e.g. Cathedral vs. flat ceilings, belt/scrapper systems for manure removal under slats) as related to ammonia and animal care

3. Environmental Research
 - a. Effects of temperature control on egg handling and holding, and egg transfer vehicles, including egg sweating and links to rots after eggs leave the farm

4. Poultry Health and Disease
 - a. Variant bronchitis-impact on breeder production and fertility
 - b. White chick syndrome
 - c. More efficient vaccination programs
 - d. Effect of probiotics

5. Food Safety
 - a. Alternatives to antimicrobials

6. Control of Food Borne Pathogens
 - a. Control of *Salmonella* vaccination (methods and effectiveness)
 - Newer *Salmonella* vaccinations or supplemental adjuvants to improve vaccine efficacy
 - b. Sources of infection
 - What is transferred to the chick? How does egg incubation affect *Salmonella* cells?
 - c. Possible barn differences, what type of construction, material, insulation, volume of air, angle to the sun (infrared radiation)
 - d. Prevalence
 - e. Population density
 - f. Control of *Campylobacter jejuni*
 - g. On-farm strategies to reduce and prevent *Salmonella* while birds are in production
 - Reduce/prevent *Salmonella* via competitive exclusion (probiotics and antagonistic bacterial species for controlling food borne pathogens)

Chicken Farmers of Canada

1. AMU
 - a. Examining on-farm best management practices to reduce the need for antibiotics
 - b. Examining effective alternatives to antibiotics (e.g. prebiotics, probiotics, oils etc.)
 - c. Strategies for improving early chick health in the absence of antibiotics
 - d. Determine changes in farmer's costs associated with raising birds without preventive antibiotics
 - e. Impact of antibiotic-free diet formulations on gut bacteria (e.g. low protein diets)
2. Food Safety
 - a. Examining the impact of management practices on pathogen reduction
 - b. Determining preferred methods of barn cleaning and disinfection to facilitate raising birds without antibiotics
3. Animal Welfare
 - a. Comparison of tools and their effectiveness in measuring environmental conditions in barns
 - b. Research examining the management of humidity in broiler barns and the impact of humidity on chickens
 - c. Research into the use of CO₂ as an indicator of environmental conditions (vs. ammonia or humidity) and its benefit as an animal welfare indicator
 - d. Investigating the causes of lameness and mitigation measures
 - e. Impact of lighting on bird health and welfare
 - Focusing on the new Code requirements for lighting
4. Animal Disease
 - a. Mycotoxins in feed and the need to understand different levels and their effects on birds
 - b. Examining more rapid methods for heat treatment of barns following a disease outbreak (e.g. Avian Influenza)
 - c. Development of new vaccines for viruses that have developed virulent resistant strains (e.g. Reovirus)
5. Chick Quality
 - a. Effect of environmental conditions during incubation on chick quality
 - b. Impact of broiler breeder flock and/or barn management on chick quality

Egg Farmers of Canada

1. Animal Care science
2. Food Safety
3. Hen health and nutrition
4. Environment and sustainability
5. Human health and nutrition
6. Non-food uses of eggs
7. Public policy and economics
8. End of flock management

Turkey Farmers of Canada

1. Flock Health
 - a. Evaluate and further develop flock management practices that reduce the need for antimicrobial use in turkey production.
 - b. Identify the causative factors related to the development of breast blisters so that mitigation methods can be explored.
 - c. Identify methods of disease transmission (e.g. avian influenza) amongst flocks and from wild sources, and assess the effectiveness of eradication techniques.
2. Turkey Welfare
 - a. Assess the effect of stocking density on flock performance parameters, behavioural indicators and environmental conditions to develop sound recommendations related to flock welfare.
 - b. Investigate new and emerging on-farm euthanasia methods and technologies to evaluate humaneness and effectiveness of various techniques.
 - c. Explore the effect of various lighting programs on flock performance parameters and behavioural indicators to develop sound recommendations related to flock welfare.
3. Food Safety and Quality
 - a. Explore new turkey meat products that meet the needs of consumers (e.g. value-added, omega fatty acids, “ready-to-cook”, “ready-to-eat”).
 - b. Explore the development and implementation of new in-plant pathogen control measures.
 - c. Develop and validate rapid detection techniques for human foodborne pathogens associated with turkey meat.
4. Production Sustainability
 - a. Develop practical alternative uses for turkey processing by-products.
 - b. Assess and validate farm production methods that promote the reduction of environmental contaminants from turkey farms (e.g. phosphorus, nitrogen, ammonia, dust).
 - c. Assess the impact of turkey farming on the immediate and remote environment (including inputs and outputs) and develop novel farming methods that reduce the ecological footprint of the Canadian turkey industry.
5. New Product Development
 - a. Explore the use of novel feedstuffs, feed additives, and/or the modification of existing feedstuffs to create more nutritionally efficient turkey diets.
 - b. Explore and develop turkey feed formulations that meet the requirements of the “free-from” and “vegetable-grain fed” marketing requirements.