Canadian Broiler Hatching Egg Producers' Association
Association canadienne des producteurs d'oeufs d'incubation de poulet à chair

CBHEPA Broiler Breeder Research Grant

Through this program CBHEPA will provide research grants for one or two University students (3rd or 4th year or graduate level). These research grants will provide an opportunity for a student to study and perform a short-term broiler breeder research project at a University or research facility in Canada. The cost associated to the presentation of the project results to an international congress are eligible.

- Detailed description of the project
- Duration and location of the project
- Potential benefits to the broiler hatching egg industry
- Reason for CBHEPA to support your project
- Budget (including CBHEPA's contribution)

The selected participant will be asked to prepare a detailed report and present it at the CHEP Annual Meeting in March 2025.

Ammonia and *Salmonella* Enteritidis (SE) reduction have been designated as top priorities by the CHEP Research Committee.

1. Production-based Research
   a. Methods to increase fertility and number of saleable chicks
      - Differences in fertility and paid hatch
      - When is it most beneficial to add spiking roosters?
      - Research on new and emerging technology to assess on-farm, real-time fertility

2. Breeder Welfare
   a. Ammonia control
      - Developing more accurate methods to measure ammonia on-farm, and validating existing ammonia measurement equipment (such as the ammonia meters used by auditors)
      - Establishing baseline ammonia levels on the farm, and once a consistent methodology is established, have CHEP compile national data to inform decisions going forward
      - Validating benchmarks (such as those referenced in the code, or those determined as a result of on-farm baseline data), including the study of the impacts of different levels of ammonia concentration on the health and well-being of birds and humans in order to determine appropriate level(s) of ammonia to include in the animal care program as maximum thresholds depending on climate and temperature
      - Cost-effective methods to control ammonia

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Topics for the 2024 Research Project (cont'd.)

- Reducing caking litter in broiler breeder and grower barns
  1. Feed additives
  2. Best management practices for ventilation

b. Strategies for feeding breeders
c. Density
d. 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

e. Aggression
- Feed energy and male aggression
- Research linking specific genetic traits with male to female aggression

f. Early mortality of breeder hens (*E.*coli, staphylococci)
- *E.*coli *a*nd staphylococci more likely to post peak mortality association

g. Physical alterations
- Toe-trimming, beak trimming: ideal methods and timing for procedures
- Cost-effective, practical management practices that can eliminate physical alterations

h. Transporting newly hatched chicks
- Length of time that newly hatched chicks are sustained by the yolk sac
- Effectiveness of hydration/nutrient products used prior to and during transit

i. Effects of vaccination programs on breeder welfare
- Current status
- Maximum thresholds – how much is too much?

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.
   b. Effects of lighting on broiler breeder production, fertility, and bird health
      - LED lighting long-term
      - Light intensity, spectrum, colour temperature (K)
   c. Environmental impact and effects of climate change as related to broiler hatching egg production

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
   e. *Mycoplasma synoviae*
   f. Effective ways to deal with HPAI, including treatment and vaccination

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Topics for the 2024 Research Project (cont'd.)

5. Alternatives to antimicrobials

6. Control of Foodborne Pathogens / SE
   a. Control of Salmonella by 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 foodborne pathogens)

This program is open to students studying poultry science in Canada.

Canadian Broiler Hatching Egg Producers' Association
21 Florence Street, Ottawa, Ontario K2P 0W6
or email us at info@chep-poic.ca

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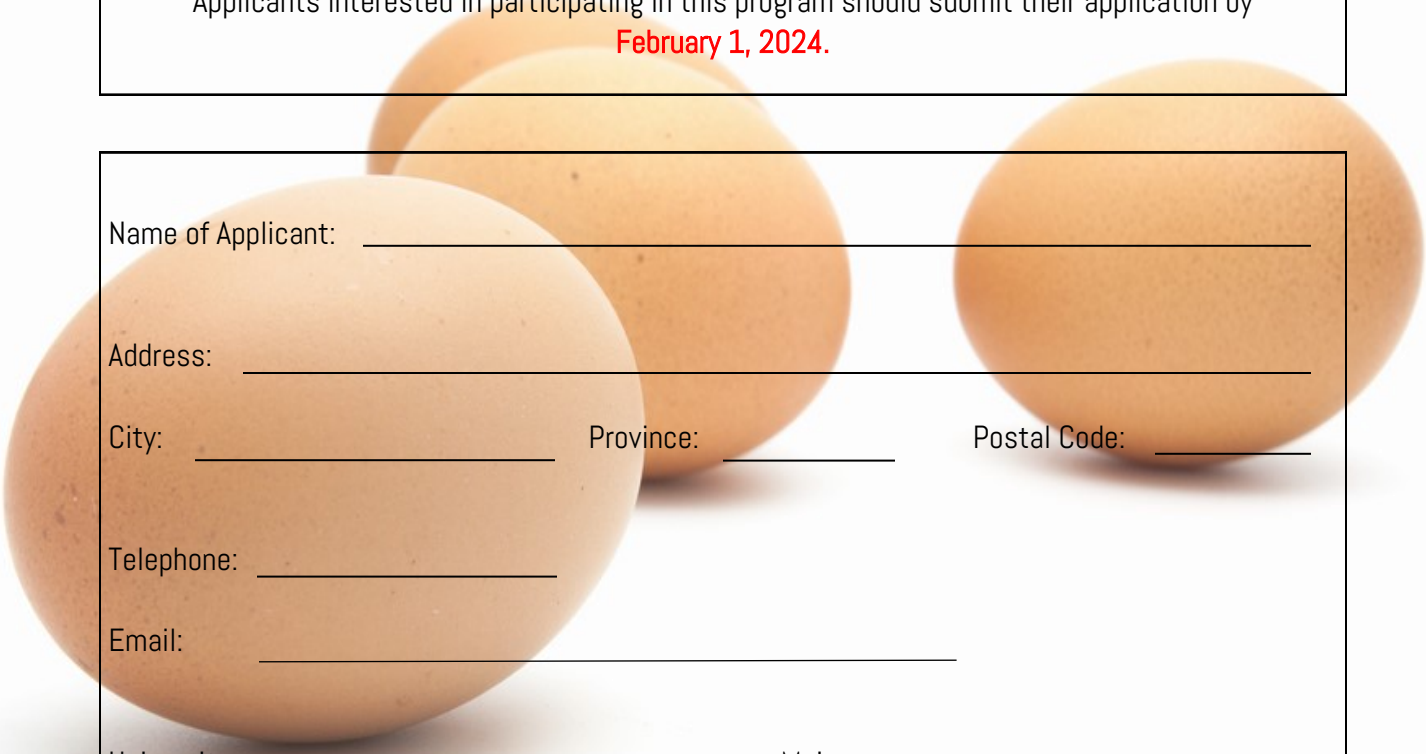
This program is open to students studying poultry science in Canada
The selection will be made from the outline and budget of the research that best aligns with CBHEPA's Research Priorities for 2024.

Applicants interested in participating in this program should submit their application by February 1, 2024.



Name of Applicant: _____

Address: _____

City: _____ Province: _____ Postal Code: _____

Telephone: _____

Email: _____

University: _____ Major: _____

Please forward your completed application and submission to the CBHEPA offices at the email or address listed below. We look forward to receiving your application.

Applications will be reviewed at the March 2024 CBHEPA Meeting

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