University of Guelph
Food from Thought: Agricultural systems for a healthy planet

Call for Proposals:
2020-22 Digital Agriculture Research Fund

<u>Overview:</u>

The University of Guelph's Food from Thought Program, funded by the Canada First Research Excellence Fund (CFREF), invites eligible U of G faculty to submit proposals for **two-year projects** for the ***2020-22 Digital Agriculture Research Fund***. This research fund will support research projects up to two years in duration in the following three priority focus areas:

1. Development of new and innovative digital, data-driven applications, analytics, and decision-support tools for the agri-food sector that make use of, or create, advanced technologies and approaches;

2. Advancements in, and contributions to, the development of integrated research data platforms and/or databases that allow for, and better support, cross-discipline analyses and large-scale/comprehensive research questions; and,

3. Research on advancements, best practices, risks, and barriers in the governance and management of agri-food and biodiversity data, including areas such as confidentiality, transparency, accessibility, and standards and regulations, among others.

Successful proposals will strongly align with and support Food from Thought's central goals of:

*   Increasing the sustainability and productivity of global food systems by leveraging the considerable power of data science, leading-edge agri-food research, and biodiversity science; and
*   Positioning Canada as a global leader in the development of innovative solutions that improve both the sustainability and productivity of food systems at global, landscape, and micro levels.

Eligible projects should include the development and/or testing of <u>experimental-stage pilots and/or prototypes</u>, as applicable. Projects will be multidisciplinary, adhere to the highest of standards of research excellence, strive to have direct and lasting benefits to Canadians, and will fit into one or more of the following themes:

1. **Global-scale** transformative research on agriculture's impact on biodiversity and the environment
2. **Landscape-scale** transformative research on sustainably intensifying agri-food production
3. **Micro-scale** transformative research on enhancing food safety and livestock health.

Applicants are also encouraged to consider whether their project can make use of the SOSCIP supercomputing platform.

SOSCIP (formerly Southern Ontario Smart Computing for Innovation Platform) is a collaborative consortium that connects Ontario's research-intensive post-secondary institutions, IBM Canada Ltd., Ontario Centres of Excellence (OCE) and dozens of small- and medium-sized enterprises (SMEs) across the province.

SOSCIP supports researchers from a wide array of disciplines by providing access to advanced computing resources, big data analytics, and expertise not available anywhere else in Canada. (https://www.soscip.org/who-we-are/)

Eligibility and Award Allocation:

In order to apply for funding through the 2020-22 *Digital Agriculture Research Fund*, researchers must hold a faculty position at the University of Guelph and be eligible for Tri-Agency grants.

This Call for Proposals is open to all University of Guelph faculty. Priority may be given to projects that build on other Food from Thought-funded projects.

Eligible researchers may participate in, and receive funding for more than one project, and may act as Principal Investigator on one or more projects.

Award Amount and Duration:

Projects may span 12 to 24 months in length. Projects will be awarded a maximum total amount of $200,000, although projects that request more than the maximum award amount may be considered if the proposals demonstrate very strong partner engagement (through significant cash and in-kind contributions) and highly-impactful anticipated results.

Review Criteria:

All proposals will be reviewed by external scientific peer reviewers and the Food from Thought Steering Committee using the following criteria:

1. **Research excellence**: The proposed research is clearly presented, is highly original and innovative and is likely to have impact by leading to ground-breaking advances in the area and/or leading to a technology or policy that addresses socioeconomic or environmental needs. Long-term vision and short-term objectives are clearly defined. The methodology is clearly defined and appropriate. The application clearly demonstrates how the research activities to be supported are distinct from those funded (or applied for) by other sources.

2. **Equity, diversity and inclusivity**: Research proposals must include a robust plan on how equity, diversity and inclusivity (EDI) best practices will be applied to the project, and reflected in the project's team, HQP recruitment, dissemination and knowledge mobilization.

3. **Alignment with Food from Thought Objectives and the Agri-food Sector more broadly**: Research objectives must clearly align with or address specific areas of focus of Food from Thought and the agri-food sector more broadly, and revolve centrally around leveraging data and advanced analytics to generate solutions for food productivity and sustainability within the themes and topic areas identified in the Call for Proposals. Projects should include the development and/or testing of experimental-stage pilots and/or prototypes, as applicable.

4. **Highly Qualified Personnel (HQP) training**: HQP training plans should include innovative, unique, and multi-disciplinary opportunities for students and research/technical staff. Training plans should be clearly defined and expected to produce high quality results in terms of overall approach and specific projects for HQP

5. **Dissemination and Knowledge Mobilization**: Proposals should include details on how the results will be disseminated to top academic journals that are reflective of the research excellence expected from this grant. Knowledge mobilization plans should include specific objectives and methods to engage with non-academic communities, end users and partners, and include a robust partner engagement strategy that is aligned with proposed project outcomes and impacts.

6. **Strength of the Project Team:** The project team should be composed of highly accomplished researchers who are, or are demonstrably progressing toward being, leaders in their fields. Project teams should be multidisciplinary and reflect the necessary expertise required to address the proposed scope of research, meet the objectives and outcomes of the project, and conduct the anticipated knowledge mobilization activities.

7. **Benefit to Canadians**: The project scope and associated outcomes should include a clear description of how the project activities will result in real social, economic, and/or environmental benefits for Canadians.

8. **Partner Contributions and Leveraging:** Proposals should include clear evidence of partner engagement, as demonstrated through letters of support documenting cash and in-kind contributions[1, 2, 3]. Proposals should also include evidence or a plan for leveraging the Food from Thought award to extend or expand the project with other research support, through grants, awards and/or contracts.

9. **Project Management Capacity and Appropriateness of Budget:** Proposals will be evaluated on the strength of the team's project management capacity to manage the various elements of the project and ensure the project proceeds on time and on budget, addresses key milestones, and ensures appropriate integration that avoids silos. Proposals will also be evaluated on the appropriateness of the budget in relation to the proposed scope of research and methods.

Application Instructions and Proposal Deadline:

Complete applications for the Digital Agriculture Research Fund must include:

1. Proposal Form (template provided)
2. Project Budget Forms (template provided)
3. Recent Common CV or Form 100 for the Principal Investigator and all Co-investigators, collated in alphabetical order using last names.
4. Signed letters of support from any partners committing cash and in-kind support, collated in alphabetical order using organization name.
5. Signed OR-5 Forms for each project.

All application documents, aside from the Project Budget form (in Excel), should be submitted as a single searchable PDF.

Complete applications must be submitted electronically to the Office of Research at resserv@uoguelph.ca no later than 11:59 pm on February 7th, 2020 using the templates provided at https://foodfromthought.ca/**callforproposals-digital/**.

---

[1] Eligibility and valuation of in-kind contributions to a project should be based on tri-agency guidelines.

[2] Cash and in-kind contributions must be pro-rated to match the project term (e.g. between start and end dates).

[3] Letters of support should be on organizational letterhead and signed by an authorized signing officer. If in-kind is being provided the valuation details should be included in the letter.

Milestone	Date
Proposal Submission Deadline	Feb 7, 2020, 11:59 pm
Notification of Award	Spring 2020
Project Start Date	April 1, 2020 or later
Project End Date	No later than March 31, 2022

* Principal Investigators may request a no-cost extension of up to one year beyond March 31, 2022 at the time of submission of the first performance report in 2021.

Responsibilities of the Principal Investigator and Co-Investigators:

Upon acceptance of the award, the Principal Investigator (PI) for each approved Food from Thought research project must submit to the Food from Thought Office the following in order to initiate the accounts setup[4] for the award:

1. Data Management Plan[5]
2. An updated project budget and its distribution across eligible project investigators.
3. Signed delegation of authority forms for the PI and all Co-Investigators receiving funding.

After issuance of the award, the PI and Co-Investigators (CI) will be asked to sign a Food from Thought funding agreement before their trust accounts are opened. Investigators must ensure that all necessary certifications are in place for the duration of the project.

The CFREF grant is governed by the Tri-Agency Institutional Programs Secretariat (TIPS) of the Government of Canada, which has specified rules and requirements for its use to which all project investigators must adhere. The PI and each CI are responsible to ensure that project expenses budgeted and charged to the Food from Thought award are eligible and in accordance with CFREF rules and requirements, as outlined in the CFREF Administration Guide. Any ineligible expenses charged to the Food from Thought award will not be covered by Food from Thought and the investigator will be responsible for the payment of ineligible expenses from other sources.

PIs are required to provide annual reporting on the overall project and associated results of the research to the Food from Thought Project Office at the end of each fiscal year (ending March 31st) during which CFREF funds are held. This reporting must include information and results of all project investigators, and will be in a format determined by the Food from Thought Project Office for the purposes of supporting institutional reporting requirements on the CFREF granto TIPS. All project CIs will be required to provide relevant project information and results to the

---

[4] Each PI and CI will be provided with a separate trust account in accordance with the approved budget.
[5] A detailed template and support to complete the Data Management Plan will be provided to those approved for funding.

Principal Investigator to ensure reporting requirements are met. In addition, all project investigators will be required to provide project information to the Food from Thought Communications Coordinator for the purposes of showcasing and sharing project information and results on the Food from Thought website, social media, and other communications for both internal and external audiences.

All project investigators will be expected to participate in the Food from Thought Annual Meeting, including the presentation of the research project in the form of oral and/or poster presentations, as determined by the Food from Thought Project Office.

Questions:

Contact Shelley Morrison, Food from Thought Project Manager at 519-824-4120 Ext. 53154 or smorri17@uoguelph.ca

Learn more about other support from CARE-AI

The Centre for Advancing Responsible and Ethical Artificial Intelligence (CARE-AI) at the University of Guelph integrates ethics, governance and social responsibility with technical leadership. CARE-AI's mission is to advance multidisciplinary AI training and research, and its responsible application to foster economic growth and improve life. CARE-AI Affiliated Faculty span from faculty across all Colleges on U of G's campus – working in one or more of the three core pillars: AI methodologies; AI applications; and AI responsibility. Our researchers apply AI and machine learning to U of G strengths, including human and animal health, environmental sciences, agriculture, agri-food, business, insurance and the bio-economy. We also develop methodologies, including learning algorithms, human-computer interfaces, data analytics, sensors and robotics while ensuring that these new platforms are safe and benefit humanity.

➢ **Interested in becoming a CARE-AI Affiliated Faculty? Email us at care-ai@uoguelph.ca**

CARE-AI offers SEED grants for Affiliated Faculty at the University of Guelph. CARE-AI's SEED grants are to support the formation of interdisciplinary research collaborations that have the potential to achieve national or international recognition for research. These grants are intended to spearhead new research initiatives through development of a prototype, feasibility study, hackathon, or sprint. Leveraging other sources of funding (including the FFT Digital Agriculture Research Fund) is encouraged.

➢ **Further details of CARE-AI's SEED grants will be released January 2020. Be the first to know about CARE-AI's SEED grants by joining our mailing list! Email us at at care-ai@uoguelph.ca**