February 28, 2017

Call for Letters of Intent- Potato Research

The Canadian Agri-Science Cluster for Horticulture is currently exploring the opportunity to establish a third Cluster under the federal government’s next Agricultural Policy Framework. The purpose of the program is to help industry-led agricultural organizations pull together national scientific and technical resources to establish clusters in support of innovation and research. Projects for the program must focus on the pre-commercialization development of new agri products, practices and processes in Canada that will make agriculture more profitable and competitive.

The matching funding requirement for the next Canadian Agri-Science Cluster for Horticulture will not be known until the program guidance document is released by Agriculture and Agri-Food Canada in the upcoming months. Industry matching funds are committed for each Cluster Activity on an individual basis by funding partners given that there is no potato industry levy/check-off in place to fund research. Researchers are encouraged to seek and secure matching industry funding for their Activities.

The Canadian Potato Council (CPC) of the Canadian Horticultural Council (CHC) originally developed a National Potato Research and Innovation Strategy in 2012. During the summer of 2016 additional potato industry stakeholder consultations were conducted to identify key priority areas for research to be considered for the next agricultural policy framework. These updated priorities were adopted by the Canadian Potato Council in November 2016, and have been added as an addendum to the 2012 National Potato Research and Innovation Strategy (attached).

The CPC is seeking letters of intent (LOI) from potato researchers in Canada who would like to participate in the Canadian Agri-Science Cluster for Horticulture 3. The following Strategic Priority Areas and specific objectives have been selected by the CPC to be the focus of potato research under the new Cluster proposal:

Creating Potato Varieties for Canada
Creating high-yielding potato varieties for Canada remains a priority for the Canadian potato industry. It is recognized that this activity involves both variety development and evaluation in the diverse production regions of Canada. Key elements of this variety evaluation activity will include the proportional recognition of the various sectors (process, fresh) within Canada, and ensure that the selection of key traits including crop yield and evaluation of sector specific attributes are done in consultation with key stakeholders. National coordination of standards for variety evaluation may offer opportunities to maximize the outcomes of this research, where appropriate. It is expected that increasing development and use of genetic markers by breeders will have the potential to increase the
efficiency of breeding and selection activities both at the very early stages of variety selection and at the stage closer to commercialization when a wide variety of characteristics are included in the evaluation process.

**Soil Health and Fertility**
Soil health and fertility is a priority area that includes specific activities targeted at increasing soil organic matter and carbon sequestration; strategies for soil borne disease and pest management through crop rotation, suppressive crops, high value rotational crops, and increasing and maintaining biodiversity.

**Precision Agriculture, New Technology, and Data Driven Agriculture**
Technology continues to evolve and represents new ways to improve the productivity and quality of Canadian potato production. Optimization of inputs by management zones, identified by imagery and remote sensing, and marker assisted diagnostics are areas that have been identified as research priorities.

**Seed Quality and Physiology**
High quality seed and optimization of stand establishment are critical factors for potato production. Research to address seed management and stand establishment (including whole and cut seed), mechanization, the use of calcium for seed tuber health, optimization of seed physiology for all regions, and the use of phosphorus acid on seed are all areas of priority to the potato industry.

**Pest and Disease**
Many pests and diseases remain as key priorities for the potato industry. The following is a list of pests noted by stakeholders and grower representatives during the recent priority setting exercise. Novel approaches for control, monitoring programs (including resistance management), development of best management practices, and improved extension strategies may be considered as priority areas for consideration. New technologies like RNAi gene editing and biopesticides could also be investigated as part of novel and effective management strategies.

*Priority pests include*: Colorado potato beetle, wireworm, scab (both powdery and common), late blight, early dying, and PVY (specifically transmission of novel strains).

**Water Management**
Water is a critical factor for optimizing potato yield and quality. The diversity of Canadian growing conditions also means that the specific priority areas related to water are variable across the country and include dealing with extremes such as drought or excessive moisture, optimization of irrigation for quality, and water use efficiency.

**Storage and Post-Harvest Physiology**
Specific activities identified in this category include the determination of variety specific storage management recommendations, disease management, investigation of sprout inhibitors as alternatives to CIPC, and quality management.
Please complete the attached Letter of Intent Form including a list of all proposed sources of funding and indicate if they are cash, in-kind and if confirmed, and submit by end of business March 23, via email to: djones@hortcouncil.ca with the subject line: Potato Research – Letter of Intent.

All letters of intent will be reviewed by the Research Working Group of the CPC and I will follow up directly with those who industry would like to receive a full proposal from. If I have omitted anyone in this email distribution that you believe should receive this email please forward it to them.

Thank you,

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