

2021 Research and Innovation Priorities for Berries*

| Priority Areas | Strategic Outcomes | Investment Priority for Research |
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| Integrated Pest Management | Effective tools, resources, and practices to manage new and existing pests | <ul style="list-style-type: none"> • Alternative products or techniques for crop protection, and their efficacy (e.g., technology, labour savings, worker safety, bio-controls, reduced residues, etc.) • Resistance management (e.g., new active ingredients, chemical groups, affordable tools for growers to evaluate the efficacy of IPM products and monitor pest pressure) • Management of Spotted Wing Drosophila (SWD) • Develop biological or alternative control methods against blueberry maggot and blueberry flea beetle (wild blueberries) • Predictive models (e.g. growing degree days, biovigilance, disease and insect lifecycle modeling based on weather, etc.) • Continued support for responsive minor use registration system (e.g. harmonization of products available and MRLs with Canada and the US) • Automated and precision IPM diagnostic and management solutions |
| Agri-tech and labour saving solutions | Agricultural technology and labour-saving solutions that will improve production efficiency and fruit quality both pre- and post-harvest. We are interested in project concepts for field demonstration, validation or adaptation of developed technologies. | <ul style="list-style-type: none"> • Harvesting solutions, technology • Automation (pre and post-harvest) • Irrigation technology, water management • Labour management solutions, data and HR management • Tools for monitoring (e.g., drones, automatic pheromone traps reporting through cloud based systems, weather stations, irrigation and soil nutrient equipment reporting to smartphones or tablets through cloud based systems, equipment to read plant health through scans) • Precision farming equipment (e.g., harvesters that produce quality product to facilitate processing and lower the loss, fertilizer applicators) • Amendments and cultural practices allowing better water retention, better protection against erosion and better soil fertility |
| Cultivar Development & Evaluation | New, profitable cultivars that meet consumer and market demand | <ul style="list-style-type: none"> • Development and evaluation of new cultivars with the following features: <ul style="list-style-type: none"> ○ resistance to insects & diseases ○ high quality / increased shelf life ○ uniform ripening / machine harvesting ○ consumer preferences (size, flavor, etc.) ○ timing according to global demand ○ adapting to changing weather patterns ○ adapting to soilless production • Regional development and testing of cultivars for adaptation to regional conditions |
| Pollination | | <ul style="list-style-type: none"> • commercial honey bee research • supporting native pollinators • improved access to pollinators |

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| | | <ul style="list-style-type: none"> Promote research allowing the expansion of supply in both native and commercial pollinators (including honey bees and bumblebees) |
| Production | Farmers have the necessary tools to optimize their quality and cost of production | <ul style="list-style-type: none"> Cost of production modelling (e.g., software programs, predictive modelling) Fertilization – both organic and conventional Cold chain improvement Cultural practices Alternative production systems (production in substrate) Climate change adaptation and mitigation Adapting to changing climate and weather patterns and more extreme weather events (e.g. frost damage) Plant growth regulators and bio-stimulants |
| Product-Market Development | <p>Develop the capacity within Canada to maximize use (from farm to processing) of the product within Canada, capturing the full economic opportunity.</p> <p>New, value-added berry-based products that meet global demand.</p> | <ul style="list-style-type: none"> Pre-commercialization support programs for new product development (e.g., nutritional labels, storage, benchtop recipes to go, market testing, business plan, risk management, etc.) Infrastructure from pilot project to reality (e.g., kitchens) Consumer trends and consumer preferences for domestic and export market opportunities Collaboration with the value chain Market & trade data collection and analysis |
| Health Research | Sustained investment in new clinical trials on the health benefits of berry consumption | <ul style="list-style-type: none"> Recruitment of new researchers, supporting students and universities Supported and valid peer review for health research proposals (to evaluate and determine whether this research has already been done) Investment in WBANA to leverage industry funds (wild blueberry) |
| Enabling Strategy Knowledge Translation and Transfer | | <ul style="list-style-type: none"> Centres of excellence / resource for farmers and researchers dealing with a particular issue or question Effective Communication of research results to farmers/end users Value chain collaboration Virtual platforms (webinars, social media, etc.) |

*including but not limited to

In addition to the above noted strategic priorities:

- There is interest in exploring the creation of a National Promotion & Research Agency (NPRA). It is felt that the benefits to the sector of the creation of such an agency would include better coordination, collaboration and funding on research initiatives.*
- There is an ongoing need in the berry industry, as well as all edible horticultural crops, to establish new plantings with disease free planting stock. There is support for CHC to engage the Canadian Food Inspection Agency and Agriculture and Agri-Food Canada for the creation of an eastern Canada Clean Plant Hub (Centre) which includes berries under a National Clean Plant Program.*